The Comparative Perspectives of the Impacts of Political Institutions on the Incidence of Speculative Attacks

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We, the undersigned, certify that we have read this dissertation of Wei-hsiu Lin and approve it as adequate in scope and quality for the degree of Doctor of Philosophy.

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Abstract

By Wei-hsiu Lin

Speculative attacks have successively occurred in the past forty years among Latin America, Europe, East Asian, Russia, Turkey, and the United States. Economists have provided explanation for the incidence of speculative attacks. They argue that inconsistent policy and incomplete information are the main causes behind the incidence of speculative attacks. All the causes are relevant to government behaviors and political economists attempt to predict governmental behaviors with political considerations. One of the most important ways to explain government behavior is partisanship. Many scholars also incorporate partisanship into their models to estimate the probability of speculative attacks. On the one hand, Leblang and Bernhard (2000) and Leblang (2003) cannot find a significant relationship between partisan government and the incidence of speculative attacks. On the other, Bussiere and Mulder (2000), and Block (2003) find a positive relationship between left governments and speculative attacks. Thus a crucial question becomes what factors have made the differences between the two findings. The main purpose of this dissertation is to address the question of partisan government and speculative attacks by looking at the interaction between political institutions and partisanship.

This dissertation examines the relationship between partisan governments and speculative attacks in several steps. I develop a framework of conditional partisan politics and empirically examine the decision-making of fiscal policy, monetary policy, and

exchange rate policy in conditional partisan politics. I argue that the partisan effect on macroeconomic policy is significant if the policy-making process is not transparent. Using a sample of 85 democratic countries over the period of 1990 to 2009, I empirically test my arguments for fiscal policy, monetary policy, and exchange rate policy. I find that in the political context of divided governments and parliamentary systems that lack transparency, voters are less likely to provide accountability to politicians, and partisan governments would adopt the policy consistent with their partisan goals. With these finding, I estimate the probability of speculative attacks in terms of economic models and find that the effect of partisanship on speculative attacks really depends on the design of political institutions.

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Table of Contents

Chapter 1

Introduction

Speculative attacks have successively occurred in the past forty years among Latin America, Europe, East Asian, Russia, Turkey, and the United States. The incidence of speculative attacks has become central to the study of international economics and the international political economy. Researchers have attempted to improve theoretical arguments and empirical works to understand the causes behind the incidence of speculative attacks. One of the significant improvements is to incorporate political considerations in theoretical arguments. Political economists found that the early models regarding crises assumed a very passive government. For example, the early models were fundamentalist. That is, crises are the most likely to occur if fixed exchange rates were unsustainable in the long run under economic situations, such as the level of foreign exchange reserves. Obstfeld (1994) provides a different perspective on the incidence of crises, in which crises involve a strong element of self-fulfilling prophecy where fundamentals are neither extremely good nor bad. The likelihood of speculative attacks is high when speculators have expectations of the indefinite survival of exchange rate regimes. The main issue raised by Obsfeld is the issue of how to think about government behavior. Government behavior is highly relevant to the information that yields speculators' expectations regarding the country's willingness and ability to maintain its exchange rate regime (Leblang and Satyanath 2006, 2008). When we take a look at the Asian currency crises in 1997, it turns out that analyzing crises requires that one specify the government's decision-making of macroeconomic policy, financial policy, and policies the government will follow of its defense of the exchange rate fails.

There have been a number of approaches to analyzing the political economy of government policy, one of the most important ways to explain government behavior is partisanship. According to Hibbs's partisan theory (1977), left and right governments have different partisan goals and will determine their policies in terms of these distinct partisan goals. Many scholars also incorporate partisanship into their models to estimate the causes of speculative attacks. On the one hand, Leblang and Bernhard (2000) and Leblang (2003) cannot find a significant relationship between partisan government and the incidence of speculative attacks. On the other, Bussiere and Mulder (2000), and Block (2003) find a positive relationship between left governments and speculative attacks. Thus a crucial question becomes what factors have made the differences between the two findings. The main purpose of this dissertation is to address the question of partisan government and speculative attacks by looking at the interaction between political institutions and partisanship. It also empirically examines the relationship between partisan government and the incidence of speculative attacks.

It examines the relationship between partisan governments and speculative attacks in several steps. In chapter two, the primary goals are to develop a framework of conditional partisan politics and empirically examine the decision-making of fiscal policy and monetary policy in conditional partisan politics. Traditional partisan theory assumes that partisan governments want to stay in office within a two-party-competition context (Alesina, Roubini and Cohen 1997). The general validity of this assumption is very questionable. Not only does the assumption conflict with the Downsian theory (1957) but also the number of political parties is usually more than two in our real life. For these reasons Alesina and Rosehthal (1995) developed a partial convergence model to see

when partisan governments would adopt their preferred partisan policy. They argue that partisan governments would adopt their preferred partisan policy if the information about voters' preference is uncertain. However, their model still assumes the two-party-competition context and fails to pay attention to the role of political institutions.

I extend Alesina and Rosehthal's model to a three-party-competition context and take political institutions into account. I argue that the impact of partisan effects depends on the extent of political responsibility of politicians distributed by voters, and the extent of political responsibility depends on the design of political institutions. I employ the concept of transparency to see whether voters are able to distribute political responsibility. Transparency, by Florini's definition, is "the release of information by institutions that is relevant to evaluating those institutions (p.5, 1999)." With the more transparent information, voters not only are able to monitor governments' performance-critical to creating accountability (Koppell 2005; Curtin and Meijer 2006) but also to involve in governance (Stirton and Lodge 2001). I argue that while the degree of governments' transparency is low, voters cannot distribute political responsibility. Therefore, partisan governments would be able to adopt their preferred partisan policy.

Using a sample of 85 democratic countries over the period of 1990 to 2009, I empirically test my arguments for fiscal policy and monetary policy. I find that in the political context of divided governments and parliamentary systems that lack transparency, voters are less likely to provide accountability to politicians, and partisan governments would adopt the policy consistent with their partisan goals. That is, left governments in divided governments and with parliamentary systems would be more

likely to have larger size of fiscal debt and higher growth rate of money supply. This finding supports my conditional partisan politics argument.

The purpose of chapter two is to echo the study of the impact of partisanship and political institutions on macroeconomic policy. Inconsistent policy is the main cause of speculative attacks in the theory of currency crises. This chapter attempts to explain how a conditional partisan model contributes to inconsistent policy. The simple logic is that if inconsistent policy does contribute to the incidence of speculative attacks, conditional partisan politics associated with inconsistent policy should have a higher probability of speculative attacks. I empirically test this argument in chapter four.

Chapter three extends my conditional partisan model to examine the choice of exchange rate regimes. The main argument in this chapter is that partisanship influences the choice of exchange rate regimes. When partisan government is transferred to a different ideological party, the new partisan government would be more likely to change the exchange rate regime arrangement. In particular, I examine the countries with a pegged exchange rate regime. I find that the new left governments are more likely to change their pegged exchange rate regimes to more flexible regimes. This effect is especially significant in the context of developing countries and presidential systems.

The main purpose of chapter three is to extend Leblang's (2003) argument that a government sometimes will defend their currency successfully, making speculative attacks fail. According to Leblang, "not all attacks result in currency devaluation. Countries are more likely to be attacked because of weak economic fundamentals, but if countries are willing to defend their exchange rate regime, the attacks are not successful." Some studies have examined the impact of the changes in government on the shifts in

exchange rate policy and found a positive relationship (Frieden, Ghezzi, and Stein 2001; Klein and Marion 1997; Eichengreen, Rose, and Wyplosz 1995; Edwards and Santaella 1993; Milesi-Ferretti and Razin 1996; and Bernhard and Leblang 2002). Based on their works, this chapter attempts to examine whether the change in partisan governments increases the probability of the shift in exchange rate regime. If the relationship is significantly positive, I will test the probability of speculative attacks in the next chapter.

Chapter four tests the probability of speculative attacks based on the two arguments in chapters two and three. Chapter two shows us that inconsistent policy is more likely when left governments are in divided governments or with parliamentary systems. According to the first generation theory of currency crises, I expect that the probability of speculative attacks should be also higher as well. Moreover, if the change in partisan governments significantly increases the probability of abandoning pegged exchange rate regimes, according to Leblang's argument we should expect that the probability of speculative attacks should be higher as well.

The last chapter is the conclusion. This includes a summary of the study, the implications of my models and some suggestions for future research.

Chapter 2

Conditional Partisan Politics:

Political Institutional Perspective on Macroeconomic Policy

2.1 Introduction

While more and more political economists regard government ideology as one important factor influencing the decision-making on macroeconomic policy, empirical studies have found mixed results. On one hand, some research argues that in a global era, all countries compete for capital flows and thus all economic policies converge on neoliberal ideal. Countries would like to adopt open trade policy and privatization policy, leading to the less partisan differences and a poor indicator of partisan orientation to policy choice (Appel 2006; Dupuy 1998; Kingstone and Young 2009). On the other hand, some still emphasize the important role of ideological government in the decision-making on macroeconomic policy (Murillo 2005; Ha, 2008 and 2012). Addressing this conflicting result, Bernhard, Broz, and Clark (2002), Franzese (2002), and Franzese and Jusko (2006) argue that the partisan effect on macroeconomic policy might be not so straightforward; instead, they consider partisan effects are contingent upon political institutions. As Franzese and Jusko (2006) argue "cycles induced by electoral and partisan incentives receive strongest empirical support when researchers recognize their context conditionality." For example, some literatures emphasize the role of electoral systems (King 1987 and 1990; Huber and Powell 1994; Monroe and Rose 2002; Iversen and Soskice 2006; Golder and Stramski 2010), because different electoral systems yield

different representation of citizens and different composition of governments, thus leading to different degree of partisan bias and diverse policies made by "representative" governments. Other literatures concentrate on the situation where an executive is not the majority in a legislature (Alt 1985, 1994 and 2000; Lohmann 1994; Alisina 1995; Thorson 1998), because when the ruling party is not the majority in a legislature, voters have difficulty in obtaining complete information regarding policymaking and in accounting political responsibility. [1]

This chapter examines two political conditions, divided governments and different government forms because these two conditions challenge the assumptions of the traditional partisan theory raised by Hibbs (1977, 1978). Alesina, Roubini and Cohen (1997) have enumerated several assumptions about partisan theory. In their discussion, the traditional partisan theory assumes that voters have complete information regarding governments' policy and representative governments in democracy always react to its voters. The two assumptions, however, are not tenable in the two political contexts. Within coalition governments, in order to find coalition partners, party leaders may need to dilute their policy commitments and thus potentially antagonize their own activists. Within divided governments two hostile parties always dispute over their interests. Policy responsibilities are not easy to be distributed between two hostile parties. Voters thus have incomplete information in divided governments (Alt and James 1985; Alt, James, and Lowry 1994 and 2000; Lohmann 1994; Alisina 1995; Thorson 1998); moreover, since presidents are directly elected from electorates, governments with presidential systems are more likely to respond to their electorate than governments with

[1] Some literatures regarding the issue that ruling parties fail to dominate in the legislature concern governments' policymaking power. They argue that once the ruling party cannot control legislature, the executives will have fewer legislative accomplishments.

parliamentary systems. Thus, it is meaningful to investigate how partisan governments behave when the two assumptions are violated.

For the conditional partisan models, this chapter develops more general criteria by extending Alesina and Rosehthal's (1995) partial convergence model. In their model, policy is more likely to converge to the median position and the partisan difference should be small in a two-party-competition. But they also argue that when the preferences of voters are ambiguous, politicians are more likely to adopt their preference policy and the partisan effects on policy would be obvious. Here I emphasize the role of political institutions. I argue that partisan effects depend on political institutions. When transparency of political institutions is low, partisan effects are stronger and policy fluctuation becomes greater. With the criteria of transparency, I am able to explain how different political institutions contribute to the degree of partisan effects. Moreover, I compare the impacts of government forms and divided/coalition governments on partisan effects. Because the two political institutions have distinct influences over the level of transparency, it would be also interesting and meaningful to compare their direct impacts and their interaction terms to partisan effects.

This chapter is structured as follows. The next section provides my theoretical argument, based on Alesina and Rosehthal's partial convergence model (1995). The subsequent two sections are the analysis of fiscal policy and monetary policy in terms of conditional partisan models. I empirically examine the conditional partisan effects with data of all democratic countries from 1990 to 2009. The last section is my discussion and conclusion.

2.2 Partisan Politics and Political Institutions

The gist of partisan theory is that politicians have ambitions in winning election so that they implement specific policies for their core constituencies and for signaling their political brands (Hibbs 1992). Politicians in partisan theory choose their relative position on the short-run tradeoff between unemployment and inflation rates in the Phillips curve. Thus, left parties, as their political brands, would like to adopt the policy leading to higher inflation rates and lower unemployment rate relative to right parties. This political signal also renders voters information to cast their vote and to distribute policy responsibility. However this is an ideal situation. For the model Alesina and Rosehthal (1995) argue that under the assumptions of two-party systems in partisan theory, parties should converge their policy to the median voter, because a party knows if it can reach the median position more so than its opponent, the likelihood of winning elections will increase significantly. Nordhaus's opportunistic political business cycle model also assumes (1975) that governments tend to stimulate the economy before the election to reduce unemployment, but suffer from the inflationary costs after the election. A government ideology plays no roles if the ruling party wants to stay in office. Moreover, Schneider and Frey (1998) argue that partisan motivation is important only when the expected probability of winning elections is high. But when the probability plummets and elections approach, governments will turn to the electoral motivation and behave as political business theory predicts. In sum, these arguments indicate that governments may not behave as the partisan theory predicts.

Despite the policy convergence proclivity suggested by Alesina and Rosehthal, and Nordhaus, the partisan effect is still theoretically possible. As Tufte (1978) and Hibbs

(1977) point out, it is not reasonable to assume all voters and all politicians are identical. Partisan preferences among voters and among politicians are typically different in democratic systems. Harrington (1993) develops a model illustrating that information transmission between voters and politicians is important. His model shows that while governments do not know what electorates' policy preferences are, it may be best off to announce their true preferences. Alesina and Rosehthal (1995) also make a similar argument, from which policy divergence is substantial only when parties have little information about voters' preferences; that is, the median position is unknown[2].

Extending Harrington's and Alesina and Rosehthal's models where information transmission between voters and politicians is important, I argue that transparency of institutions in political systems matters for partisan models and it is more important than the clarity of voters' preferences. In fact it is not easy to detect the true distribution of voters' preferences, not only because the number of voters is huge when politicians face elections but also voters have multiple identifications and their interests vary even though they are left/right-leaning voters. Relatively, politicians' preferences are easier to be found. Their platforms proposed in campaigns and their policy choice adopted after winning elections are important information for voters to judge their policy preferences. Despite the existing information, voters sometimes still have difficulty in receiving enough information. Candidates would like to appear moderate in the eyes of voters, but once they win elections, they might renege on campaign promises and implement their most preferred policy. Voters may recognize the inconsistency between campaign promises and real policy and turn to focus on what politicians actually do when they are

[2] In their analysis, they also argue that the higher the reward from winning elections, the higher will be the probability of policy convergence.

in office. Unfortunately, voters still cannot fully obtain complete information. Democracy is depicted as a principal agent relation between voters and governments where voters (principals) can observe the outcome but not the action of governments (agents) (Miller 2005). With an inherent asymmetric information structure existing between voters and governments in democracies, voters thus have a difficult time in monitoring governments and cannot make a clear prospective choice to governments (Shugart and Carey 1992).

Solving of asymmetric information problem is not theoretical impossible. Institutional designs will motivate politicians to disclose information (Powell and Whitten 1993; Samuels 2004; Hellwig and Samuels 2008). As Powell and Whitten argued, greater transparency is a way to create "clarity of responsibility." In their argument, the clarity of responsibility depends on the joint existence of bicameral opposition, opposition control of committee chairs, a minority government, and weak party cohesion. Those structural factors impede electorates' access to information and thus reduce the clarity of responsibility. With the lower level of the clarity of responsibility, voters then cannot account policy responsibility and cannot punish or reward the incumbent governments with their votes.

How does the level of transparency contribute to partisan models? I duplicate Alesina and Rosehthal's (1995) partial convergence model to see how parties decide their policy in a policy space first and then extend their model and add my transparency argument. I will show that when information is low, politicians are unwilling to keep their campaign promises and more likely to adopt their most preferred policy, leading to greater partisan effects and policy fluctuations. As above, I will argue that when the transparency in political systems is low, partisan effects are greater.

As can be seen in figure 1, Alesina and Rosehthal provide a two-party-competition model. In their model, there are only two parties, party D (the left party) and party R (the right party). Each party has its own ideal policies, θ^D and θ^R. Because both parties desire to win and both parties are unsure of the true distribution of voters' preferences, they propose their platforms close to the expected median voters, rather than converge toward the median voters. That's what they called "partial convergence." Voters in their analysis only observe the platforms the parties propose, so the probability of winning elections depends on the location of x^D and x^R. They define the probability of party R and party D as $P^R=P(x^D, x^R)$ and $P^D=1-P^R(x^D,x^R)$, respectively.

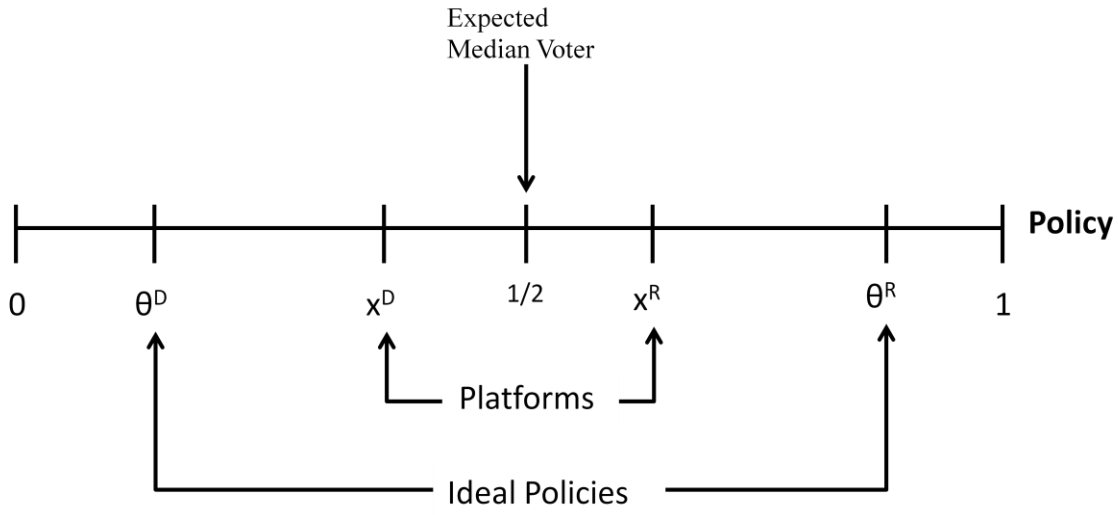

Figure 1. The Partial Convergence Model of the Two-Party Competition

Note: Alesina and Rosehthal (1995), p 26.

Alesina and Rosehthal consider the inconsistency between parties' platforms and actual policy. They argue that when winning elections, party ^{D} is more likely to adopt θ^D instead of its platforms x^D (for party R as well), because its electoral motivation is irrelevant to policy choice and has no incentives to adopt x^D. The only way to solve the credibility problem in party's platforms, they believe, is in the context of repeated

political competition (Alesina 1987). They argue that "when the parties face each other and the voters in more than one election, promises of moderation may become credible. In fact, reneging on a promise today would lead to costs in lost reputation in future elections (p.31)." Indeed, a repeated game leads players to a focal point and reveals more information to players; however, Alesina and Rosehthal's model is based on the assumption that voters have complete information, knowing parties' preferences and the process of policymaking. Even though we can agree that the situation of two-party-competition should be better in receiving information, it is not always true with some forms of government, such as divided governments in presidential systems. For example, in figure 1 when party D wins the presidential election and party R becomes the majority in congress, the information regarding governments' preferences and the process of policymaking will become not so clear. Moreover, if the number of players is more than two, how do parties choose their policy and how do multiple parties contribute to partisan effects? I will extend Alesina and Rosehthal's two-party-competition model into three-party-competition model, and compare the different policy moves and impacts on partisan effects under complete and incomplete information contexts.

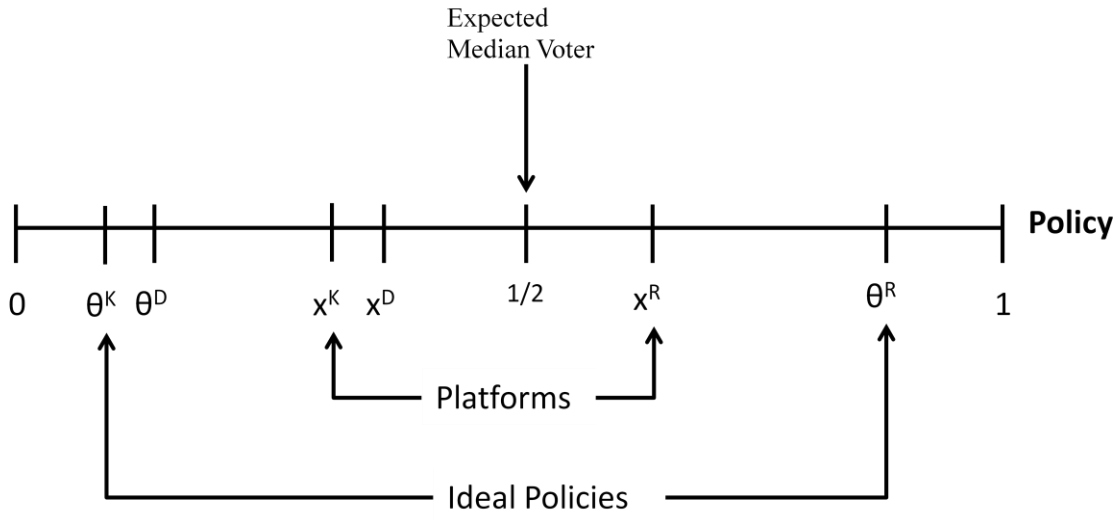

Figure 2. The Partial Convergence Model of Three-Party-Competition

As figure 2 shows, suppose that party D and party K win the election to form a coalition government. Because party D and party K may renege on campaign promises, the actual policy (p^D and p^K) would not be x^D and x^K. In an extreme case, let's say the policymaking process is thoroughly ambiguous. Voters have no information regarding policymaking and cannot distribute responsibility to any parties. The coalition government formed by party D and party K then is free to choose its p^C in the policy space between θ^D and θ^K[3]. Suppose we are in a repeated political competition, voters have more information (still incomplete) regarding the coalition government's preferences and the process of decision-making, but the repeated game is still not able to lead the policy to the median position. The main reason is that voters' capacity to punish the incumbent government for deviating from the median position or their platforms is not enough. Median voters might punish party D or K with difficult choices and partisan

[3] In this coalition government, party D and party K would like to choose their p^D and p^K closed to θ^D and θ^K, respectively. For maintaining the coalition government, the final policy (p^C) should be located in their inter-interval, θ^D to θ^K.

voters would punish/reward party D or K with their partisan bias. Consequently, party D and K still stay in their "comfortable zone", the interval of θ^{D} and θ^{K}.

Assume that now this political system becomes more transparent; voters in this political system have enough information to distribute responsibility and are capable of punishing the incumbent government. For winning elections, politicians need support from the median voters, so governments in the political system with high transparency are more likely to keep their campaign promises close to the expected median voter. In our example, the coalition government formed by party D and party K will adopt the policy in the policy space between x^{D} and expected median voter[4]. Comparing the two possible policy results, we find that transparency narrows down parties' policy mobility zone and policy choice moves toward the median position. The most important thing is that transparency reduces partisan effects, avoiding extremely partisan policy.

In addition, the policy process is also relevant to partisan effects (Alt and Lowey 2000; Wehner 2010). Some policies, such as fiscal policy, require the interaction of the executive and the legislature, obtaining a consensus from the two branches. In figure 1, suppose that party D is the ruling party and party R has the majority in the legislature. Suppose that transparency in the political system is low. Party D and party R have different preferences. Since their preferences over fiscal policy are different and two parties can avoid policy responsibility in a low transparency environment, the final result

[4] Again, if party D and party K would like to keep their promise and adopt their policy closed to the expected median voter, they will adopt their policy p^{D} and p^{K} in the interval between x^{D} and the median position, and between x^{K} and the median position, respectively. For maintaining the coalition government, they would likely to adopt the policy located in x^{D} and the median position.

depends on their bargaining power, either x^D or x^R [5]. On the other hand, when transparency is high with the situation where the two parties come with the same preference, the range of fiscal budget is between x^D and x^R[6]. Again, transparency reduces the policy mobility zone and partisan effects as well. In the three-party-competition model, the results are similar. Under a low transparent political context, the governing parties, party D and party K, and the legislative party, party R, tend to adopt the policy located at x^K or x^R, depending upon both branches' bargaining power. But when the level of transparency becomes high, the policy will locate at the interval between x^D and x^R, reducing partisan effects on the policy.

In the next two sections I analyze fiscal policy and monetary policy with my argument that low transparency in a political system leads to greater partisan effects. I will examine two different political institutions: government forms and divided/coalition governments. Because the two different political institutions contribute to transparency differently, I also look at their interaction terms.

2.3 Conditional Partisan Politics over Fiscal Policy

Transparency is usually higher in the political contexts of unified governments and presidential systems. In addition, the two political institutions not only contribute to the level of transparency, but also affect the size of fiscal debt, increasing the complexity of my discussion. Below I will individually elucidate the impact of the two political institutions on fiscal policy and how left governments behave in the two political contexts

[5] Because party D and party R in this case are veto players, the final result depending upon their bargaining strength is the tangent point of their indifference curve. If party D has more strength or agent-setting power, the result is x^D. Otherwise, the result is x^R.

[6] Here I argue that even though party D and party R are the same party, their preferences are still possible to be slightly different. The result in this case should be the middle point between them. But I consider their bargaining strength, so the result should locate at the interval between x^D and x^R.

first. Then I will investigate interaction terms between presidential systems and divided governments to investigate how left governments behave in the political contexts.

2.3.1 Divided Governments

Divided government usually refers to a situation where there are no simultaneous same-party majorities in the executive and legislative branches of government (Elgie 2001. Most analyses of divided government have analyzed presidential systems and name the same situation in parliamentary systems as "minority government (Strom 1990)." As Elgie (2001) asserts, we do not have objective criteria which allow us to identify the various periods of unified government and divided government. The gist of his statement is that not all coalition governments in parliamentary systems are divided partisans and not all single-party majority governments in presidential systems are examples of unified government. There might be internally divided or cohesive partisans in these political structures. Thus, the critical point of divided government, he argues, should refer to a main question where: "the executive fails to enjoy majority support in at least one working house of the legislature (Elgie 2001, p11)" Following Elgie's statement, I will use the term "divided government" and briefly analyze how left governments behave in the context that the ruling party fails to control the majority in the legislature, whether in presidential or parliamentary systems.

Divided governments have proven to be one of the reasons for fiscal debt (Roubini and Sachs 1986; Edin and Ohlsson 1991; McCubbins 1991; Alt and Lowry 1994; Hagan 2006; Persson, Roland, and Tabellini 2007). In their works, fiscal debt are depicted as a common-pool problem in which politicians want more spending on their target groups for winning elections than the optimal levels of the whole society. Because

every single politician acts similarly, the spending in that country must increase considerably, leading to excessive levels of public spending. McCubbins (1991) argues that such collective dilemmas may be solved by party discipline, and Hagen and Harden (1995), Hallerberg and Hagen (1999) stress the importance of budget rules in fiscal discipline; however the cooperation to solve collective problems in divided government will largely be nonexistent.

When we take partisan governments into account, how do left governments in divided government contribute to fiscal debt? The existing literature has two different predictions. The first school predicts that partisan governments in divided governments are less likely to adopt partisan policy. Lowry, Alt, and Ferree (1998) find that American voters know the difference between Democrats and Republican and have expectations in terms of the difference. Voters reward/punish Democrats or Republican if they cannot meet their expectations. Because both parties know voters' reactions, Alt and Lowry (2000) argue in their dynamic model of divided partisan government that parties tend to respond as voters' expect. Accordingly, they find that a transition government tends to move to their partisan targets in the first two years, and move less in divided governments than in unified governments. Their model implies that divided governments reduce partisan effects because a partisan government loses its agenda-setting power in divided governments. The second school provides opposite observations, in which fiscal debt must increase, as long as partisan fragmentation exists. Krause (2000) investigates U.S. fiscal debt in the context of divided governments and finds that the character of divided governments is partisan fragmentation. The degree of partisan fragmentation makes it

more difficult to reach compromise among the President, Senate, and House with conflicting preferences. As a result, U.S. fiscal debts in divided governments are greater.

Both models regard the issue of partisan effects for fiscal debts, but they fail to account for the realities of partisan effects. Alt and Lowry's model attenuates the impact of "divided governments" on fiscal policy and they argue that the size of fiscal debt should be lower in the context of partisan governments in divided governments. They fail to explain why the size of fiscal debt still significantly increases when a Republican government faces a Democratic congress. Krause's model is able to explain the fiscal debt in Republic government, but fails to elucidate the partisan differences in the size of fiscal debt; that is, Democratic government might have larger size of fiscal debt than Republican government in divided governments.

Cox and McCubbins (1991) provide a more interesting observation regarding the size of fiscal debt in partisan governments in divided governments. They find that different partisan governments dominating fiscal policy in divided government have different policy results. When Democratic government is interrupted by Republic government of all branches, the tax level substantially falls relative to the baseline under unified Democratic government. And when Democratic government is interrupted by Republic control of Congress but not the presidency, there is an even larger decline in tax level, than in the first case. Their findings imply that divided governments enhance the partisan differences. Their arguments and findings do contribute to partisan theory in divided governments; however, the empirical evidence is still insufficient, not only because the situation of Republic control of Congress coupled with Democratic control of the presidency in American political history is rare, but also because we want to

generalize the impact of divided governments on partisan theory. With the previous discussion regarding the impact of transparency in political system, I agree more with Cox and McCubbins' observations, and argue that the lower transparency in divided governments has a negative impact on fiscal policy. The ruling party would like to adopt x^D or x^R in figure 1, or x^K or x^R in figure 2. In the decision-making process of fiscal policy, the executive dominates and has agenda-setting power, thus left governments (supposed it is party D) would choose the policy closed to its bliss point x^D. This policy choice is different from left governments in unified governments. As left governments in unified governments where the level of transparency is higher, they would like to choose the policy in a policy space between x^D and x^R, because the left-leaning executive has to negotiate with the right-leaning legislature. Whatever left governments choose, the final policy is right to x^D, relative having smaller sizes of fiscal debt. This leads to the hypothesis

H1: Left governments in divided government have larger sizes of fiscal debt than left governments in unified government.

2.3.2 Government Forms: Presidential Systems vs. Parliamentary Systems

Government forms determine the interaction between executive and legislative branches, and thus have impacts on the decision-making of fiscal policy (Persson and Tabellini 2003, 2004; Cheibub 2006; Persson, Roland, and Tabellini 2007). These researches argue that presidential systems enjoy several advantages that allow the systems to have more fiscal discipline. First, presidential systems have a higher level of transparency because direct election for presidents and separate powers make it easier for

voters to identify and distribute policy responsibility to policy makers. Politicians in turn are more likely to respond to voters' demands, increasing electoral accountability in presidential systems relative to parliamentary systems (Shugart and Carey 1992; Samuels and Shugart 2003; Samuels 2004; Hellwig and Samuels 2008). Second, the division of power between executive and legislature creates an information-rich environment. Policymaking in presidential systems requires both bodies' agreement, from which both bodies have incentives to disclose information to the public for their support. Voters thus have opportunities to know about policies and process of government (Persson, Roland, and Tabellini 1997)[7].

Regarding fiscal policy, some research also add government ideology as one independent variable and find a significantly statistical result (Persson, Roland, and Tabellini 2000; Cheibub 2006). As the traditional partisan theory predicts, the results show us that no matter what government forms, left governments are more likely to increase the sizes of fiscal debt than right governments do. But the surprising thing is that not many researches have analyzed the interaction effect between government forms and partisan governments. This interaction term has a special implication for institutional research. If left governments with different government forms have different sizes of fiscal debt, this interaction term of government forms and government ideology indicates that not only the variations of the impact of partisan governments and political

[7] Gerring, Thacker, and Moreno (2009) have different opinions. They compare the economic performances of presidential and parliamentary systems and conclude that presidential systems do have advantages over transparency and electoral accountability. However, other defects such as unstable politics in multiple parties in congress (Mainwaring 1993), indecisiveness leading to gridlock, greater fiscal pork and rents, and a tendency toward larger budgets deficits (Cox and McCubbins 2001) blank out the advantages in presidential systems. Here I do not want involve the debate about the impact of presidential and parliamentary systems on fiscal debt. What I want to emphasize here is that interaction effect of government forms and partisan governments.

institutions on fiscal policy exist it also stresses the importance of the study of political institutions.

My transparency argument has developed the idea that a government is more likely to adopt the median policy in a transparent political context. Because most electorates prefer fiscal discipline, I argue that left governments in presidential systems would like to have smaller sizes of fiscal debt. Thus my hypothesis is.

H2: Left governments in parliamentary systems have larger sizes of fiscal debt than left governments in presidential systems.

2.3.3 Interaction Terms of Government Forms and Divided Governments

As Cheibub (2001) has shown, the frequency of divided governments in presidential systems increases considerably when the number of political parties increases. According to his estimation, when the number of effective party are more than two, the probability of divided governments in presidential systems goes from 38.67% to 41.01%. When the effective parties go to four to five, the probability climbs up to 90.38%. In his research, by average, there is 58.08% that divided governments are in presidential systems. Strom (1990) also finds that although the study of minority government in parliamentary system has various results, minority cabinets account for about one-third of all postwar governments.

Because presidential systems and parliamentary systems differ in responding to divided/minority governments, it will be interesting to investigate what partisan effect could be if we take both factors into considerations. Two different effects would work in this interaction situation. First, as I have discussed in the previous section, divided

governments would enhance partisan effects, and we should expect the larger sizes of fiscal debt in divided-presidential/parliamentary systems. Second, presidential systems would diminish partisan effects and the sizes of fiscal debt should be smaller in parliamentary-divided/unified governments. With this interaction term, we also can specify the expected impact of divided governments and the impact of presidential systems on fiscal policy. Thus my hypotheses are.

H3: Left governments in divided-parliamentary systems have larger sizes of fiscal debt than left governments in unified-parliamentary systems.

H4 Left governments in divided-presidential systems have larger sizes of fiscal debt than left governments in unified-presidential systems.

H5: Left governments in parliamentary-unified governments should have larger sizes of fiscal debt than left governments in presidential-unified governments.

H6: Left governments in parliamentary-divided governments should have larger sizes of fiscal debt than left governments in presidential-divided governments.

2.4 Conditional Partisan Politics over Monetary Policy

The way governments influence monetary policy is quite different from the way in fiscal policy. First, the decision-making of fiscal policy needs coordination between the executive and the legislative branches. That means government budgets cannot be easily changed in response to economic fluctuations. But the decision-making of monetary policy does not need legislative approval. Governments can influence the rate of money supply and thus affect aggregate demand unless there is central bank independence and even then governments are often able to influence policy indirectly (Keefer and Stasavage 2003). Extending governments' adjustment of the rate of monetary

supply, another issue raised here is central bank independence. The higher is central bank independence, the less likely are governments to change the rate of money supply. Because we do not have a reliable index to measure central bank independence in developing countries, we will estimate the rate of change in money supply within the two groups of developed and developing countries instead. Usually developed countries have more independent central banks than developing countries.

The second feature regards the connection between fiscal policy and monetary policy. When governments raise their expenditure, they have to find some additional sources to finance their spending. For governments, the increasing of money supply or tax are two main methods to finance countries' spending and they supplement each other. That is, if governments have difficulty in collecting more tax, the increasing of money supply instead acts as supplement. In addition, issuing public debt is the more common method of financing in the advanced economies. However, this method has its limits. When governments want to issue more public debt over the ceiling in law, governments confront similar problems as tax. Amending public debt management law needs the coordination between the executive and the legislative branches. Governments cannot respond immediately if they have pressing financial demands.

With the two critical features of monetary policy, governments with larger sizes of fiscal debt are expected to increase money supply or tax to finance their fiscal debts. And if governments are incapable to collecting tax or to issuing more public debt, we should expect that governments may increase their money supply to finance fiscal debts. With the two inferences we should return to the impact of political institutions. As I have discussed, presidential systems tend to diminish partisan effects, leading to smaller sizes

of budget deficits when left governments are in power. I therefore can predict that left governments in presidential systems should have slower growth rate of money supply compared to left governments in parliamentary systems. Divided governments affect governments' ability to collect tax. Since tax policy must be passed by the national legislature and securing legislative approval in divided governments is a difficult task, governments in divided governments are expected to have a difficult time in collecting more tax. Left governments in divided governments have larger sizes of fiscal debt as I have discussed in the previous section. With the second inference that governments with the inefficient capacity to collect tax should increase their money supply, I can predict that left governments in divided governments should have higher growth rate of money supply compared to left governments in unified governments.

In addition, I would like to estimate the growth rate of money supply in the two groups of developed and developing countries because of central bank independence. Central bank independence plays a critical role in the supply of money. With higher central bank independence, governments are less likely to intervene in the decision-making of monetary policy. However, since there is no reliable index to measure central bank independence for developing countries and most of the developed countries share the characteristic of independent central banks, I would separate my sample countries into developed and developing countries instead of using an index of central bank independence. With the higher level of central bank independence in developed countries, the impact of political institutions on the money supply should be less or insignificant.

In sum, I argue that the partisan effect on monetary policy is conditional on political institutions. Political institutions shape politicians' incentive to increase or

decrease money supply; thus, left governments in different political contexts behave differently, and they do not always have higher growth rate of money supply as the partisan theory predicts. Accordingly, my hypotheses are:

H7: Left governments in divided governments have higher growth rate of money supply than left governments in unified governments.

H8: Left governments in presidential systems have slower growth rate of money supply than left governments in parliamentary systems.

2.5 Empirical Analysis

In order to evaluate the above hypotheses, I examine 81 democratic countries from 1990 to 2009 (see Appendix A). I use the Polity IV database to define the democratic countries. Polity IV is a widely used database to measure democracy[8], including five attributes: competitiveness of executive recruitment, openness of executive recruitment, constraint that exists on the executive, regulation of political participation, and competitiveness of political participation. Its ranges are from -10 for an extreme autocracy to +10 for the most democratic states. Because Polity IV index is continuous and has a fast dynamic in every single year, in order to narrow my samples to real democracies, I define as countries whose score in Polity IV database is above 5 in five consecutive years[9].

Moreover, the exchange rate regime is a very important factor in the decision-making of fiscal policy and monetary policy. In terms of the Fleming-Mundell model,

[8] Another widely used database is Freedom House. Bosin (2009) has evaluated the two datasets and finds the high correlations between databases.

[9] In Polity IV data base, the polity scores express the level of democracy from -10 (strong autocratic) to +10 (strong democratic). The Polity IV Project also converted the regime categories by polity scores, in which the project suggests "autocracies" are defined by the polity scores of -10 to -6, "anocracies" by -5 to +5, and "democracies" by +6 to +10.

fiscal policy is more efficient in increasing output in fixed exchange rate regimes and monetary policy is more efficient in flexible regimes. If so, we should expect that governments with fixed exchange rate regimes would like to increase government expenditures to stimulate economic growth; on the other hand, governments with flexible regimes prefer to use monetary policy instead. For this reason, I would like to add exchange rate regime as one of my control variables. The classification of exchange rate regimes is available from two main sources. For the period from 1990 to 2001, the data is available from Bubula and Otker-Robe (2002) and for the period from 2002 to 2009, I collect the data from *Annual Report on Exchange Arrangements and Exchange Restrictions*. The data of exchange rate regimes I use is de facto not de jure exchange rate regimes[10], and I group these exchange rate regimes into five categories: 1) Hard pegs; 2) Adjustable parties; 3) Crawls; 4) Managed floats; 5) Independent floating.

After analyzing the impact of political institutions on macroeconomic policy, I would like to move further to the inconsistent policy in chapter four. The discussion of the inconsistent policy has implication of the incidence of currency crisis and that is my main topic in chapter four. Because the inconsistent policy regards the issue of the relationship of maintaining a pegged exchange rate regime and the adoption of fiscal policy and monetary policy, I delete the countries with independent floating exchange rate regimes. In addition, because monetary expansion is one of my dependent variables, and the member countries of European Monetary Union (EMU) have lost their authority

[10] De facto exchange rate regimes refer the regime the countries actually use and de jure exchange rate regimes indicate the regime the countries officially declare to use.

over the amount of money supply already, I also drop those EMU member countries if their joining date is before 2009[11].

2.5.1 The Dependent Variables

This chapter focuses on two macroeconomic policies and has two dependent variables: the sizes of fiscal deficits and the growth rate of money supply. To measure these two variables in a cross-national way, I use the data of central government debt over GDP and M2 over GDP from *International Financial Statistics* and *World Development Indicators* by the World Bank, respectively.

2.5.2 The Independent Variables

My political variables include ideology, divided government and government forms. The variable of ideology measures ideological composition of government, in which I use a dummy variable, LEFT, to indicate left governments in a given year. For the variable of divided government, DIVIDED, I use a dummy variable to capture the different parties dominating executive and legislative branches. Government forms cover presidential and parliamentary systems and I use a dummy variable, PRESIDENT, to express presidential systems. Regarding various government forms, I treat presidential and semi-presidential systems the same. The main reason I treat them the same is that both systems have presidential elections. Previous research has found that presidential elections cause the executive branch's different behaviors comparative to the executive branches in parliamentary systems (Samuels and Shugart, 2010). All three variables are

[11] Because different EMU member countries have different joined date and my sample period is from 1990 through 2009, I only focus on the countries that joined EMU before 2009. The countries I drop and their joined date are listed below: Austria (1999), Belgium (1999), Finland (1999), France (1999), Germany (1999), Ireland (1999), Italy (1999), Luxembourg (1999), Netherlands (1999), Portugal (1999), Spain (1999), Slovenia (2007), Cyprus (2008), Greece (2001), Malta (2008).

available from *Database of Political Institutions* (DPI) by the World Bank. Finally, I add the data of government forms from Cheibub's book (2007) when the data from DPI is missing. In addition, I use GDP growth, unemployment rate, interest rate, inflation and different exchange rate regimes as my control variables.

2.5.3 Model Specification

I employ a pooled cross-section-time-series analysis with White robust standard errors to control heteroskedasticity. As we can see in figure 3 through figure 6, countries in different models have large residuals. Heteroskedasticity plays no part in the determination of the unbiasedness property; that is, the estimators are still linear, unbiased and consistent, but the problem is that the estimators are no longer best and the minimum variance is not given any more.

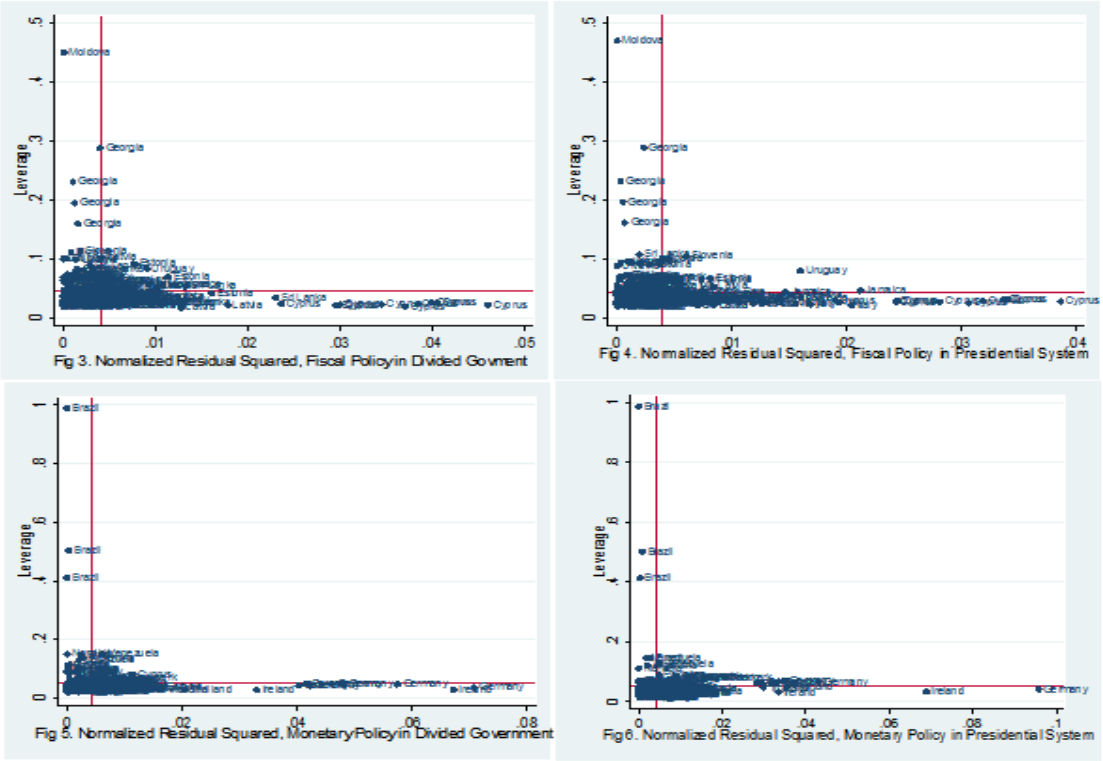

Fig 3. Normalized Residual Squared, Fiscal Policyin Divided Govment
Fig 4. Normalized Residual Squared, Fiscal Policy in Presidential System
Fig 5. Normalized Residual Squared, MonetaryPolicyin Divided Government
Fig 6. Normalized Residual Squared, Monetary Policy in Presidential System

2.6 Empirical Results

Table 1 is the statistical summary (see Appendix B). Table 2 shows the results of models for fiscal policy. None of this coefficient of LEFT is statistically significant, suggesting that partisan effect do not directly affect fiscal debts. However, this does not mean that a partisan effect on fiscal debt does not exist, since the institution-free model fails to take the role of political institutions into account.

Model 2 and model 3 in table 2 test partisan effects on fiscal policy depending upon divided government and government forms. The result (LEFT×DIVIDED) of model 2 support my hypotheses. Left governments in divided government (model 2) do significantly have larger sizes of fiscal debt by around 2.7% over GDP relative to left governments in unified government. The result (LEFT×PRESIDENT) in model 3 is not significant, although the sign is positive, it does not meet our expectation. I also estimate the sizes of fiscal debt under pure political institutions without partisan consideration (not reported). My empirical results show that divided governments do tend to have larger size of fiscal debt around 0.89 over GDP relative to unified government. Presidential systems also have an effect on reducing around 0.94 of fiscal debt over GDP relative parliamentary systems. This result is consistent with what Persson and Tabellini (1999, 2003 and 2004), and Persson, Roland, and Tabellini's (2000) argument that presidential systems relative to parliamentary systems have smaller size of government.

Model 4 is the result of the interaction terms of government forms and divided governments. The results suggest that divided governments have strong negative effects on fiscal policy. I will show you the estimated fiscal debt to test my hypotheses.

Model 5 tests the partisan effect on monetary policy. As partisan theory predicts, left governments relative to right governments increase 14% of the growth rate of money supply. Model 6 and model 7 test conditional partisan politics in the political context of divided government and presidential system. In model 6, although the coefficient (LEFT× DIVIDED) is positive and consistent with our hypothesis that has traits of higher growth rate of money supply, it is statistically insignificant. The negative and statistically significant result of the interaction term between left governments and a presidential system in model 7 supports my hypothesis that presidential systems reduce partisan effects on monetary policy.

Table 3 regards the impact of central bank independence on money supply and the results show that the impact of political institutions on money supply upon developed and developing countries are really different, but only for presidential systems. Both left governments in divided government of developed and developing countries, as model 12 and model 18 show, have higher growth rate of their money supply relative to left governments in unified government. However, as to presidential systems, model 13 shows that the impact of presidential systems on partisan effects to money supply in developed countries is statistical insignificant, indicating that the growth rate of money supply of left governments in presidential systems is undistinguished from ones in parliamentary systems. The result in developing countries is different. Model 19 presents that left governments in presidential systems of developing countries do have slower growth rate of their money supply as our hypothesis predicts. The two results not only directly support the importance of central bank independence in the decision-making of monetary policy but also indirectly support my argument of the importance of political

institutions. That is, political institutions will create or diminish the incentives to motivate politicians' intervention for their benefits.

As Kam and Franzese (2010) suggest, we should report the predicted results from our equations. I list the estimated sizes of fiscal debt in table 4 and estimated growth rate of money supply in table 5 in terms of different political institutions.

Table 4. Estimated Size of Fiscal Debt

Table 4a. Estimated Sizes of Fiscal Debt in Divided Governments

	Unified Government (Divided Government=0)	Divided Government (Divided Government=1)
Non-left (Left=0)	0.853	1.473
Left (Left=1)	1.229	4.14

Table 4b. Estimated Sizes of Fiscal Debt in Government Forms

	Parliamentary System (President=0)	Presidential System (President=1)
Non-left (Left=0)	1.474	0.79
Left (Left=1)	2.067	1.775

* The results listed in the table are the ratio of fiscal debt over GDP

Table 5. Estimated Growth Rate of Money Supply

Table 5a. Estimated Growth Rate of Money Supply in Divided Government

	Unified Government (Divided Government=0)	Divided Government (Divided Government=1)
Non-Left (Left=0)	61.23	41.941
Left (Left=1)	64.998	50.141

Table 5b. Estimated Growth Rate of Money Supply in Government Forms

	Parliamentary System (President=0)	Presidential System (President=1)
Non-Left (Left=0)	55.938	51.983
Left (Left=1)	85.394	47.875

* The results listed in the table are the ratio of M2 over GDP

Table 4 and 5 support two important theoretical arguments, and the core concept is that the partisan effect is contingent upon political institutions. Alesina and Rosenthal (1995) have argued that partisan convergence (or as they said "the partial convergence") should be more likely than partisan divergence, because parties would like to propose platforms converging toward the middle in order to increase chances of winning in terms of a Downsian model. The potentiality of partisan divergence in their argument is substantially only when there is a large among of uncertainty over the distribution of voter preference among politicians. Partisan politicians with incomplete information have more incentives to renege on their commitment of convergence policy in campaign and lead to partisan divergence. Accordingly, divided governments actually reveal the uncertainty of voters' preference distribution. Voters either split their tickets in

presidential system or cast their votes in a proportional representative system in parliamentary system to cause the two different and opposite parties controlling executive and legislative branches separately. Both conditions confuse politicians about the true distribution of voter preferences and then are consistent with what Alesina and Rosenthal called the partial convergence model. Table 4a and table 5a empirically test and support Alesina and Rosenthal's partial partisan convergence model. Left governments and non-left governments in unified government converge on their fiscal and monetary policy, and shorten their partisan differences, but their policies are divergent when they are in divided government. Table 4a and 5a show us that the partisan difference of the sizes of fiscal debt in unified government is 0.37% and the difference in the growth rate of money supply is 3.7%, but when partisan governments are in divided government the difference in the sizes of fiscal debt becomes 2.66% and the difference in the growth rate of money supply becomes 8.2%.

In addition, table 4a and 5a also support the traditional partisan theory. Left governments do tend to choose the policy with the larger sizes of fiscal debt and higher growth rate of money supply. What we should heed is that divided government relative to unified government extends the partisan divergence between left and right governments.

However, table 4b and table 5b seem to have opposite results when compared to my theoretical argument. As my hypothesis 2 argues, presidential systems provide more information, thus voters can account more responsibility to politicians and in turn politicians are more likely to adopt policy toward the median position. But this incentive is not quite obvious in parliamentary systems. Left governments and non-left governments in presidential systems should converge on their macroeconomic policy,

and this result should reduce the partisan differences in macroeconomic performances. The partisan difference in the growth rate of money supply, as table 5b shows, is 29.4% in parliamentary systems, but becomes only 4.1% in presidential systems. The result is consistent with my argument; but table 4b shows the partisan difference of the sizes of fiscal debt between non-left governments and left governments in parliamentary systems is only 0.59% and 0.98% in presidential systems. Due to this result, I consider the essence of divided governments in presidential systems. Because divided governments have significant impact on the size of fiscal debt and its impact is opposite to the impact of presidential systems, I need to specify the impact of presidential systems by interacting presidential system with divided governments.

Table 6 is the estimated sizes of fiscal debt with the interaction terms of government forms and divided governments. From table 6 we can specify the impact of divided governments and government forms and confirm our findings. First, divided governments do have negative impacts on fiscal policy in all different political context arrangements. The sizes of fiscal debt are higher in the four different political arrangements. Second, the partisan difference between unified and divided governments is smaller in presidential systems (0.415) than one in parliamentary systems (0.936). This result finds the "real" impact of presidential systems and is consistent with our hypothesis 2.

Table 6: Estimated Sizes of Fiscal Debt with the Interaction Terms with Government Forms and Divided Governments

	Non-Left governments (left=0)		Left governments (left=1)	
	Parliamentary Systems (president=0)	Presidential Systems (president=1)	Parliamentary Systems (president=0)	Presidential Systems (president=1)
Unified Governments (divided=0)	1.145	0.663	1.677	0.876
Divided Governments (divided=1)	2.081	1.078	3.679	4.424

* The number in the table is the ratio of fiscal debt over GDP

In sum, while table 4a and table 5a show us that divided government really enhances partisan differences in the sizes of fiscal debt and the growth rate of money supply, table 4b, table 5b, and table 6 offer evidence that presidential systems have the opposite effects on the partisan difference.

Additionally, one may reasonably question the way to interpret the "effect" of interactive models since the effect of independent variables on the dependent variable in interactive models is not constant. Thus the coefficient on a variable and the effect on the dependent variable of a unit increase in that independent variable are not identical. The effect of one independent variable depends on its coefficient and interaction terms, as well as the value of another independent variable. That is, the effect of one independent variable on the dependent variable varies. For this special feature of interactive models, Kam and Franzese (2010) suggest the method of the derivative, $\partial y/\partial x$, if y is dependent variable and x is the independent variable. With their suggestion, I take the first derivative in terms of left governments in models 2, 3, 6 and 7 to find the marginal effect of left governments on fiscal policy and monetary policy, and then graph the 90% confidence intervals around each estimated marginal effect from figure 7 through 10.

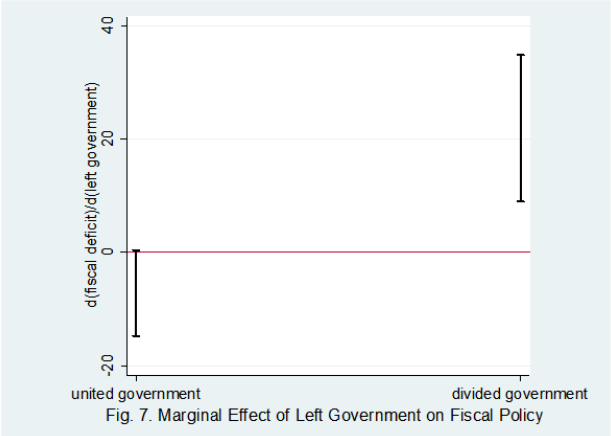

Fig. 7. Marginal Effect of Left Government on Fiscal Policy

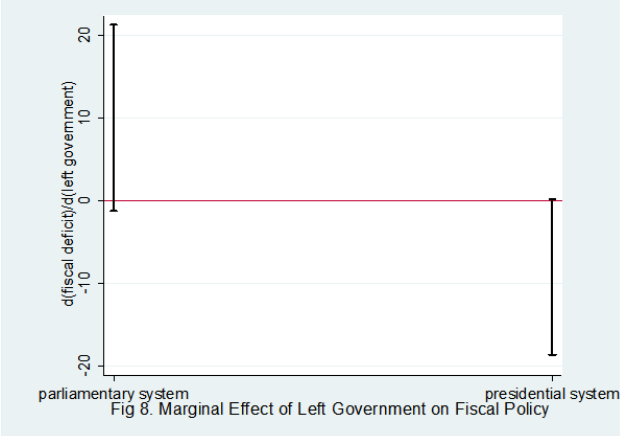

Fig 8. Marginal Effect of Left Government on Fiscal Policy

Figure 7 and 8 are the marginal effect of left governments on fiscal policy in different political institutions. We can see that in the systems with unified governments, parliamentary systems and presidential systems, the confidence intervals include the value of zero, suggesting that the marginal effect of left governments is not distinguishable from zero in countries with these systems. However, the confidence interval of divided government does not include the value zero, indicating that the marginal effect of left governments can be statistically distinguished from zero in these cases and figure 7 reveals that the marginal effect takes positive values, as partisan theory predicts that left governments tends to raise the level of fiscal debt. These results imply that partisan difference in fiscal policy does exist under divided government rather than unified government, but does not exist under different government forms.

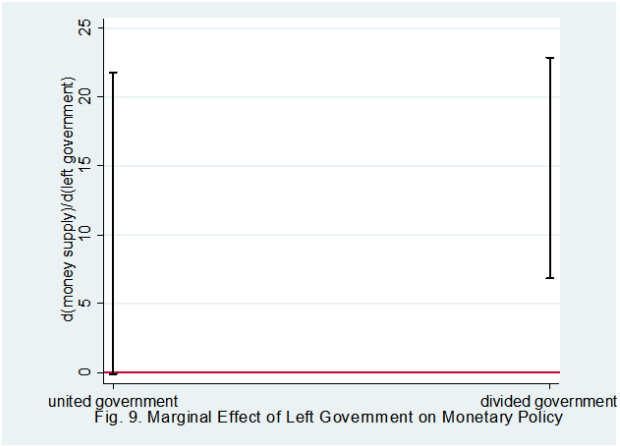

Fig. 9. Marginal Effect of Left Government on Monetary Policy

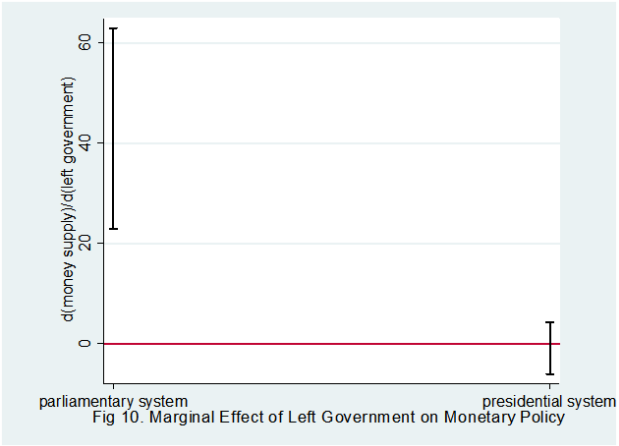

Fig 10. Marginal Effect of Left Government on Monetary Policy

Figure 9 and 10 show the marginal effect of left governments on monetary policy in various political institutions. From the two figures, the confidence intervals of presidential system and unified government cover the value of zero, indicating that the marginal effect of left governments is not distinguishable from zero in the two cases, but not in the cases of parliamentary system and divided government. Furthermore, it is worthwhile to mention that the confidence intervals of unified government in figure 9 overlap across the values of divided government, suggesting that we cannot say with high levels of certainty that the marginal effects of left governments in cases with unified government and with divided government are statistically distinguishable from each other, but not in the case with parliamentary system and with presidential system.

There are several important theoretical implications uncovered from the empirical findings above. Alesina and Rosenthal (1995) said that "partisan cycles cannot be easily detected in countries typically run by large coalition government,… because coalition governments avoid sharp partisan changes (p.248)." The first implication from my theoretical argument and empirical tests is that what Alesina and Rosenthal argued ignores the transparency in political contexts. Partisan differences in fiscal policy and monetary policy are obvious under divided government, because opaque political

contexts provide politicians space to manipulate policy. The second implication is that government forms do affect partisan models on macroeconomic policy. But it seems that the effect is more robust in monetary policy and weak in fiscal policy. Again, the effect varies across the policy.

An important issue regarding the data of macroeconomic variables is the problem of non-stationarity. The problem of non-stationarity is that if a variable belongs to non-stationary time serial, a regression analysis will generate a spurious regression (Granger and Newbold 1974). That is, the relationship between a dependent variable and independent variables shown in a regression model is flawed. Some literature has found that the data of fiscal debt may be non-stationary[12] (Wilcox 1989; Uctum and Wicken 2000; Feve and Henin 2000) and suggests that researcher should do unit root tests and cointegration analysis before analyzing the data. If fiscal debt data is non-stationary, any external shocks would yield permanent effects and the mean would not converge to a specific constant in the long run. In this case, it is worth asking. How do partisan effects affect the size of fiscal debt if the data of fiscal debt is non-stationary? How do partisan governments adjust the size of fiscal debt if a previous government has a different ideology? It is a promising topic for future research with theoretical implications, because if partisan effects on the size of fiscal debt are permanent, this finding will conflict with Alesina's rational partisan model (1997) and is consistent with Hibbs's traditional partisan model (1977).

[12] Not all literatures agree the problem of non-stationarity in fiscal debt. Hamilton and Flavin (1986) and Smith and Zin (1988) reject the non-stationarity for US. and Canadian debts.

Table 2 Estimation Results for Partisan Effects on Fiscal Policy and Monetary Policy (All Sample Countries)

Independent Variables	Fiscal Policy				Monetary Policy		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Left	.439 (.378)	-.008 (.428)	-.089 (.546)	.009 (.551)	13.85** (5.621)	10.842 (6.626)	41.637*** (12.596)
Divided Government		.194 (.439)	.793** (.341)	1.926** (.858)		-7.979** (3.753)	-3.916 (3.339)
President			-1.347** (.534)	-.387 (.548)			14.876** (6.622)
LeftxDivided		2.675*** (.753)		.22 (1.14)		4.004 (6.821)	
LeftxPresident			1.047 (.864)	-.201 (1.003)			-43.534*** (12.514)
DividedxPresident				-2.844** (1.111)			
LeftxDivided x President				3.732** (1.61)			
GDP Growth (lagged)	-.167*** (.048)	-.183*** (.049)	-.142*** (.047)	-.155*** (.046)	-2.362*** (.543)	-2.432*** (.557)	-2.244*** (.48)
Unemployment (lagged)	.063* (.034)	.025 (.034)	.041 (.036)	.026 (.036)	-1.902*** (.369)	-1.695*** (.381)	-1.405*** (.381)
Inflation (lagged)	.001* (.0008)	.001** (.0008)	.001** (.0008)	.001* (.0007)	.003 (.005)	.002 (.005)	.006 (.007)
Interest Rate (lagged)	-.0006*** (.0001)	-.0006*** (.0001)	-.0006*** (.0001)	-.0006*** (.0001)	-.002* (.001)	-.002* (.001)	-.002* (.001)
Tax Revenue (lagged)	-.125*** (.038)	-.142*** (.038)	-.142*** (.047)	-.168*** (.033)	2.88*** (4.24)	2.812*** (.423)	2.865*** (.411)
Pegs	-1.133** (.447)	-.762* (.452)	-1.211** (.52)	-1.578** (.597)	25.408*** (7.443)	24.491*** (7.485)	26.762*** (7.155)
Adjust	.248	.665	.252	.367	.087	-.542	4.015

	(.55)	(.558)	(.594)	(.566)	(6.025)	(6.295)	(6.782)
Crawls	1.311*	1.282*	1.588***	1.267*	-15.023***	-15.952***	-16.193***
	(.711)	(.67)	(.688)	(.707)	(3.526)	(3.594)	(4.124)
Constant	3.689***	4.068***	4.586***	4.924***	22.04***	25.829***	-785.295
	(.634)	(.694)	(.794)	(.813)	(6.653)	(7.265)	(709.147)
R^2	0.18	0.23	0.23	0.28	0.48	0.49	0.54
N	281	276	276	276	237	235	235

Table 3 Estimation Results for Partisan Effects on Fiscal Policy and Monetary Policy (Developed Countries)

Independent Variables	Fiscal Policy			Monetary Policy		
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13
Left	.494 (.575)	.646 (.583)	-.13 (.644)	2.439 (11.371)	-6.249 (5.688)	-9.363 (9.536)
Divided Government	1.458** (.653)	1.706** (.685)	1.468** (.739)		-9.733 (10.929)	-75.172*** (10.45)
President			-.066 (.928)			-59.138*** (12.543)
DividedxLeft		-2.521 (1.536)			33.005*** (8.891)	
LeftxPresident			1.141 (1.159)			-4.833 (15.387)
GDP Growth (lagged)	-.278*** (.081)	-.282*** (.081)	-.279*** (.105)	-.424 (1.922)	-2.321 (1.928)	.139 (1.736)
Unemployment (lagged)	.021 (.063)	.014 (.068)	.006 (.069)	-6.129** (2.589)	-6.371*** (2.274)	-6.045*** (2.053)
Inflation (lagged)	.162 (.228)	.204 (.231)	.151 (.227)	4.382 (3.784)	3.424 (4.479)	.168 (3.558)
Interest Rate (lagged)	.167 (.154)	.283 (.197)	.177 (.154)	-9.279*** (2.704)	-8.676*** (2.595)	-1.5 (1.852)
Tax Revenue (lagged)	-.175*** (.055)	-.179*** (.056)	-.195** (.055)	-5.141*** (1.374)	-4.685*** (1.259)	-1.461 (1.059)
Pegs	-1.939 (1.194)	-1.611 (1.273)	-2.167 (1.154)	30.725*** (11.423)	38.049*** (10.023)	77.209*** (9.174)
Adjust	-.326 (1.058)	-.065 (1.11)	-.567 (1.043)	20.714 (31.349)	3.589 (31.49)	-21.225 (25.981)
Crawls	-.024 (1.358)	.342 (1.413)	.436 (1.357)	32.298 (32.469)	31.927 (25.877)	-15.016 (21.755)
Constant	4.503** (1.954)	3.744* (2.055)	5.328*** (1.855)	260.302*** (29.461)	261.708*** (27.981)	175.543*** (31.109)
R^2	0.51	0.52	0.52	0.69	0.74	0.81
N	99	99	99	50	50	50

Table 4 Estimation Results for Partisan Effects on Monetary Policy (Developing Countries)

Independent Variables	Fiscal Policy			Monetary Policy		
	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19
Left	.635 (.667)	-.377 (.838)	.352 (1.074)	-2.492 (2.236)	-6.909** (3.093)	9.499 (6.375)
Divided Government	.292 (.45)	-.388 (.525)	.298 (.44)		-8.341*** (2.543)	-6.04*** (2.097)
President			-1.442 (.95)			5.492 (4.896)
DividedxLeft		2.844** (1.199)			9.283** (4.522)	
LeftxPresident			.178 (1.323)			-16.657** (6.57)
GDP Growth (lagged)	-.17*** (.055)	-.173*** (.057)	-.159*** (.056)	-1.096*** (.265)	-1.141*** (.255)	-1.056*** (.247)
Unemployment (lagged)	-.004 (.061)	-.014 (.057)	.031 (.064)	-2.021*** (.239)	-1.871*** (.228)	-1.741*** (.221)
Inflation (lagged)	.002** (.0006)	.002** (.0006)	.002** (.0006)	.004 (.005)	.003 (.005)	.003 (.005)
Interest Rate (lagged)	-.0007*** (.0001)	-.0007*** (.0001)	-.0007*** (.0001)	-.002** (.001)	-.002** (.001)	-.002** (.001)
Tax Revenue (lagged)	.003 (.107)	-.025 (.111)	-.026 (.092)	4.098*** (.179)	3.982*** (.185)	4.095*** (.172)
Pegs	-.375 (.651)	-.537 (6.31)	-.809 (.809)	-8.919*** (3.291)	-11.318*** (3.435)	-8.615* (4.377)
Adjust	.244 (.865)	.466 (.878)	-.072 (.895)	-4.184 (3.622)	-4.081 (3.938)	-3.884 (4.143)
Crawls	1.597* (.815)	1.402* (.8)	1.771** (.79)	-4.321* (2.472)	-5.906** (2.433)	-4.922* (2.568)
Constant	2.047* (1.113)	2.924** (1.246)	3.345** (1.377)	2.313 (3.661)	7.552* (4.349)	-1.846 (6.349)
R^2	0.12	0.15	0.15	0.82	0.84	0.84
N	177	177	177	187	185	185

2.7 Discussion and Conclusion

In conclusion, this chapter finds that left governments in divided government are likely to have larger sizes of fiscal debt and higher growth rate of money supply. In addition, left governments in presidential system are likely to have smaller sizes of fiscal debt and slower growth rate of money supply. In sum, my findings argue that partisan models cannot simply be depicted as left governments targeting a low unemployment rate and right governments favoring low inflation rate. Governments' ability and incentive to pursuit their targets are contingent upon political institutions. Traditional partisan theory has too strong assumptions regarding the relationship between partisan governments and electorates. That is, if partisan governments want to win elections, partisan voters' supports are not enough. As the Downian model, partisan governments still need supports from the median voters. But it is only available when the transparency of political contexts is high, because only with the higher transparency voters are able to account responsibility and decide their votes. By causally interpreting politicians' incentives with institutions in a single framework, I emphasize the importance of institutions and remodel the impact of partisan politics on fiscal policy and monetary policy in different institutional contexts.

This chapter also echoes a growing literature on conditional partisan effects. Franzese (2002b) emphasizes the importance of institutional conditionality and encourages researchers to understand how partisan politics vary across different institutional environments. Additionally this chapter also speaks to the research on the impact of government forms. Instead of comparing the pros and cons between presidential system and parliamentary system, more and more literature starts to investigate the constitutional impacts on macroeconomic policy (Persson and Tabellini 1999 2003 and 2004; Persson, Roland, and Tabellini 2000). Even though they have

concluded that political institutions themselves are capable of explaining macroeconomic outcomes, they fail to explain variation of the outcomes. The main reasons for their failure are not only the unchangeable institutional factors but also the ignoring of the composition of government. This chapter fulfills this unfinished task by analyzing politicians' incentives under various institutions and by testing the theoretical implications of institutionally conditioned partisan politics.

Finally this chapter has further implications for the probability of currency crises. While Krugman (1979) and Flood and Garber's (1984) theories point out that inconsistent policy among fiscal policy, monetary policy and pegged exchange rate regimes causes crises, why the inconsistency policy occurs and under what conditions the inconsistency policy is more likely do not show up in their works. In chapter four I will follow the findings in this chapter and provide a political institutional perspective on the incidence of inconsistent policy.

Appendix A

17 Industrial Countries

Austria	Belgium	Canada	Denmark	Finland
France	Germany	Greece	Iceland	Ireland
Italy	Netherlands	Norway	Portugal	Spain
Sweden	UK			

33 Emerging Market

Argentina	Bangladesh	Botswana	Brazil	Bulgaria
Chile	Colombia	Czech Rep.	Ecuador	Estonia
Hungary	India	Indonesia	Israel	Latvia
Lithuania	Mauritius	Mexico	Pakistan	Peru
Philippines	Poland	Romania	Slovak Rep.	Slovenia
South Africa	South Korea	Sri Lanka	Thailand	Turkey
Ukraine	Uruguay	Venezuela		

31 Developing Countries

Albania	Armenia	Benin	Bolivia	Costa Rica
Croatia	Cyprus	Dominican Rep.	El Salvador	Fiji
Gambia	Guatemala	Guyana	Honduras	Jamaica
Macedonia	Madagascar	Malawi	Mali	Moldova
Mongolia	Mozambique	Namibia	Nepal	Nicaragua
Panama	Paraguay	Solomon Island	Trinidad	Zambia

Appendix B

Table 1 Statistical Summary

Variables	Observation	Mean	Std. Dev	Min	Max
DEBT	629	1.477	3.857	-32.063	34.236
MONEY	925	48.654	32.481	5.844	213.887
TAX	585	17.967	6.935	6.483	55.707
LEFT	1163	.326	.469	0	1
DIVIDED	1111	.34	.474	0	1
PRESIDENT	1163	.608	.488	0	1
INTEREST	710	48.518	633.7366	.418	15778.57
INFLATION	1123	36.034	308.398	-6.243	7485.492
UNEMPLOYMENT	948	9.429	5.617	.685	37.583
GDP GROWTH	1143	3.327	4.545	-30.9	18.287
PEGS	1163	.187	.39	0	1
ADJUST	1163	.314	.464	0	1
CRAWLS	1163	.191	.393	0	1

Chapter 3

Conditional Partisan Politics:

Political Institutions and Exchange Rate Policy

3.1 Introduction

This chapter explores the impact of political economy factors on exchange rate policy in democratic countries. It studies what determine the choice of and the change in exchange rate regimes, with particular emphasis on partisanship, institutions and their interaction. The presumption of this study is that different partisan governments have their own preference over exchange rate regimes (Hibbs 1987 and 1988). Oatley (2004) has argued that political parties represent different social groups and would like to use macroeconomic policy to move the domestic economy to their idea point. Left governments would prefer a lower unemployment rate and, thus are more likely to stimulate the economy with lower interest rates and expansionary monetary policy, leading to capital outflow and rising domestic demand, respectively. Consequently, these outcomes increase the current account deficits and the demand for imports, weakening the country's currency and increasing the pressure for depreciation. Countries with higher pressure for depreciation are less likely to maintain a pegged exchange rate and, Oatley (2004) finds that left governments more often adopt a flexible exchange rate regime than right governments. Based on the partisan governments' choice, this chapter examines whether the change in partisan government affects the choice of exchange rate regime to meet their political benefits. That is, given economic conditions, whether new left governments are more likely to abandon a pegged exchange rate regime, when they take over right governments.

This chapter has several theoretical implications. First, some studies have examined the impact of the change in government on the shifts in exchange rate policy and found a positive relationship (Frieden, Ghezzi, and Stein 2001; Klein and Marion 1997; Eichengreen, Rose, and Wyplosz 1995; Edwards and Santaella 1993; Milesi-Ferretti and Razin 1996; and Bernhard and Leblang 2000). I extend their models with traditional partisan theory. I argue that the essence of the impact of the change in government centers on the issue of the change in partisanship. If a ruling party shifts to one with a different ideology, the exchange rate policy is expected to be different. Second, the change in exchange rate regimes influences countries' macroeconomic performance. I examine the relationship between the changes in exchange rate regimes and the probability of speculative attacks. As Lebleng (2003) said, "not all attacks result in currency devaluation. Countries are more likely to be attacked because of weak economic fundamentals, but if countries are willing to defend their exchange rate regime, the attacks are not successful." Finding the political factors contributing to the changes in exchange rate regimes might also discover the political factors contributing to the probability of speculative attacks. I empirically test the relationship between political factors and the probability of speculative attacks in the next chapter.

This chapter is organized as follows. The next section briefly reviews the partisan effects on the choice of the exchange rate regime. Section three contains my main argument, explaining how the change in partisan governments contributes to the change in exchange rate regimes. Section four gives my sample, data, and model specifications. Section five consists of my empirical results, from which I will estimate the probability of the various exchange rate regimes chosen by democratic governments as a baseline model, and then estimate the probability of changing exchange rate regime in terms of my argument with an ordinal logistic regression

model and panel logistic regression model, respectively. The last section contains concluding remarks.

3.2 The Partisan Effects on the Choice of Exchange Rate Regime

While the partisan effect has been widely recognized as an important factor affecting the decision-making of macroeconomic policy, the partisan effect on the exchange rate regime choice is still ambiguous. Bernhard (1998) finds there is no relationship between partisan orientations and the adoption of the central bank independence (CBI) in the 1970s and 1980s. Bernhard and Leblang (1999) also cannot find a relationship between partisanship and an exchange-rate regime choice. Conversely, Milesi-Ferritti (1995) and Garrett (1995) argue that because left governments realize their lack of credibility and they needed credit during the interwar period, their willingness to adhere to the gold standard was increased. But left governments only maintain currency valuation by the gold standard for a while, they usually abandon it very quickly. According to the findings above, Bernhard, Broz, and Clark (2002) argue that the partisan effect on the choice of the exchange rate regime is not so straightforward. The effect should be contingent upon other variables. [13] One reason that we cannot find a simple relationship between the pure partisan effect and the exchange rate regime choice depends on how we classify the types of exchange rate regimes.

The first problem of the partisan effects on the exchange rate choice is that the choice of exchange rate regime should have more variations rather than the fixed and floating rate regimes.

[13] For example, Goodman and Pauly (1993) add the degree of capital mobility, McNamara (1998) include policy makers' belief, and Oatley (1997) put CBI into his model. They attempt to estimate the conditional partisan effects on the exchange rate regime choice.

[14] This constraint of choice comes from the bipolar hypothesis, in which in the world of high capital mobility, only hard fixed and free floating exchange rates are more stable (Fischer 2001). However, this bipolar hypothesis confronts theoretical and empirical challenges. Willett (2003) has argued that the criteria of the theory of optimum currency area (OCA) offers a guide line for how countries choose their exchange rate regimes between fixed and floating regimes. But also the OCA theory indicates that most countries are not good candidates for either fixed or floating exchange rates, because not many countries meet all the criteria for choosing either type of regimes, suggesting that that they should choose the intermediate exchange rate regimes. Angkinand, Chiu, and Willett (2009) also find that despite the more crisis prone native of adjustable pegs, it does not mean countries have to choose either hard fixed or free floating regimes, in order to reduce the risks of currency crises. Instead countries are still free to choose among the intermediate exchange rate regimes, in order to reduce the risk, if governments have strong strength. In addition, academic research investigated by Bubula and Otker-Robe (2002) shows that 66.3% of the democratic countries of all IMF member countries adopted intermediate regimes between 1990 and 2001. This empirical evidence implies that the bipolar hypothesis is not accepted by most of countries.

The second problem regarding the exchange rate regime setting is the inconsistency between *de facto* and *de jure* exchange rate regimes, which is addressed by Calvo and Reinhart (2002). Calvo and Reinhart found that many countries follow a *de facto* regime, which is different from what is officially announced. That is, some countries announce their official peg exchange rates but do not implement these rates in practice, while some countries fear floating by adopting *de facto* pegs, but officially declare floats. This inconsistency leads to a

[14] In Bernhard and Leblang's work (1999), they code the regime choice among fixing, floating, and multilateral currency arrangement. It is better than the one with only two choices of fixed and floating regimes, but the variation of regimes is still too small.

misunderstanding of countries' exchange rate regimes. This misunderstanding has confused researchers in the past as to the real choices of and the real preferences over exchange rate regimes for partisan governments, causing an inconclusive result between partisanship and the choice of exchange rate regimes.

Accordingly, I regroup the different exchange arrangements from Bubula and Otker-Robe (2002) and the IMF's annual report into five categories: hard pegs, adjustable parties, crawls, managed floating, and independent floating, in order to catch the variation of exchange rate regimes. With the new dataset, I follow what Hibbs (1987 and 1988) and Oatley (2004) have argued; left governments are less likely to maintain fixed rate. My hypothesis regarding the partisan effect on the exchange rate choice appears as follows.

Hypothesis 1: The probability of adopting a more flexible exchange rate regime is higher in left governments than in right governments.

3.3 The Conditional Partisan Politics and the Change in Exchange Rate Regimes

The exchange rate regime choice and the change in exchange rate regime in one specific country are two relevant issues because different governments in one country might have different policy preferences. Empirically, figure 1 shows the choice of various exchange rate regimes in terms of the flexibility apparent in democratic countries during the period of 1990 to 2009. Since the exchange rate regimes in figure 1 are *de facto* regimes, the result indicates that democratic governments do not always keep their monetary commitment.

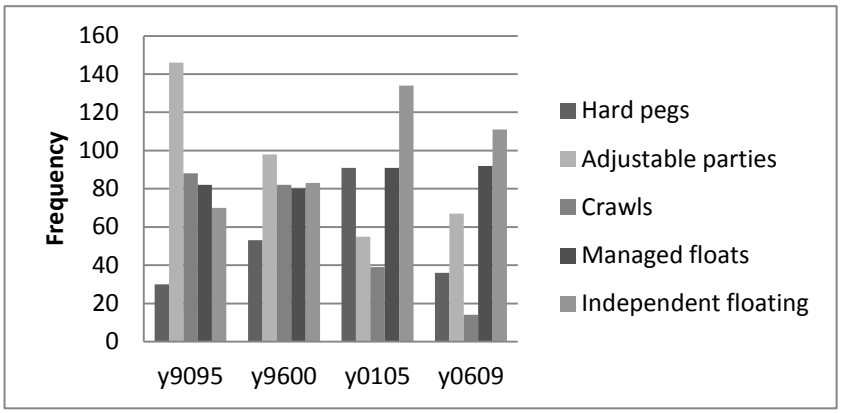

Figure 1: Democratic Governments' Exchange Rate Regimes from 1990 to 2009.

Notes: 1. Exchange rate regimes here are *de facto* exchange rates. Data of regimes in 1990~2001 is from Bubula and Otker-Robe (2002), and in 2002~2009 is from *Annual Report on Exchange Arrangements and Exchange Restrictions*, IMF, because IMF started use *de facto* exchange rate regimes since 1999.
2. y9095, y9600, y0105, and y0609 refer year from 1990~1995, 1996~2000, 2001~2005, and 2006~2009, respectively.

Based on the empirical evidence above, political scientists have attempted to explain the exchange rate arrangement in terms of political institutions (Leblang 1999; Bernhard and Leblang 2002). While the institutional approach explicitly shows how political institutions contribute to the exchange rate regime choice, it usually fails to explain why governments change their exchange rate regimes, because political institutions in one country do not change very often. For example, Leblang (1999) argues that governments with proportional representation (PR) are more likely to float than governments with majoritarian electoral systems. The main reason is that PR systems encourage the competition for political support, so policymakers are more likely to adopt a floating exchange rate regime to use expansionary fiscal and monetary policies for electoral gain. Despite the significant results in his model, this static statement cannot explain why governments with proportional representation choosing floating regimes would change their regime to more rigid ones, such as the table one shows. Table one shows that a floating exchange rate regime is not the final choice for countries with a PR system.

These countries are more likely to change their regimes to more rigid regimes. In order to get a true description of the change in the exchange rate regime, we need to take more factors into account.

Table 1: The Change in Exchange Rate Regimes in Countries with PR

Country	Year	The Change in Ex
Argentina	1990	Independent Floating to Hard Pegs
Bulgaria	1996	Independent Floating to Hard Pegs
Ecuador	2000	Independent Floating to Hard Pegs
El Salvador	1992	Managed Floats to Adjustable Parties
Finland	1996	Independent Floating to Adjustable Parties
Guyana	2005	Managed Floats to Adjustable Parties
Italy	1996	Independent Floating to Adjustable Parties
Lithuania	1994	Managed Floats to Hard Pegs
Slovenia	1996	Managed Floats to Adjustable Parties
Sri Lanka	2008	Managed Floats to Adjustable Parties
Ukraine	2003	Managed Floats to Adjustable Parties

I argue that the partisan effects not only affect the choice of exchange rate regime, but also contribute to the change in the exchange rate regime, when partisan governments change. When right governments are taken over by left governments, new left governments have different policy preferences than the former right governments. New governments then have strong incentives to change the exchange arrangement to meet their political demands. As Velasco and Neut (2004) have argued, governments should pick the exchange rate regime that best fits their underlying economic and political conditions. Accordingly, I predict that the

change in partisan governments increases the probability of shifting the exchange rate regime. Based on the model of partisan effects on exchange rate choice, I assume that the right governments had a pegged regime and predict that when right governments have been taken over by left governments, the probability of shifting to a more flexible regime is higher than the probability of maintaining a pegged regime. These predictions help us understand how and why governments are willing to change exchange arrangements and support Klein and Marion's (1997) arguments about the duration of exchange-rate pegs. In their arguments, governments establish their political reputation and policy credibility through the commitment to exchange-rate pegs. Since new governments have smaller damages to their reputation and credibility at the beginning of the policy maker's tenure, they would like to abandon their pegs, instead of keeping previous leaders' promise. Their analysis is correct, but ignores the partisan effects. New governments do have incentives to change monetary commitment, but only if their political demands from exchange arrangements are different from the previous government. In summation, my hypotheses appear below.

Hypothesis 2: The probability of shifting exchange rate regime is higher when partisan governments change in election.

Hypothesis 3: The probability of shifting to more flexible regimes is higher when right governments have been taken over by left governments.

Moreover, I argue that the partisan effects on the change in exchange rate regimes also stem from the conditions of political institutions. As I have discussed in the previous chapter, the extent to which partisan effects is influenced by the characteristics of political institutions. When political institutions' transparency is higher, electorates are more capable of punishing or

rewarding partisan governments with their votes (Powell and Whitten 1993). With this argument, I estimate the partisan effects on the monetary commitment in terms of political contexts.

In terms of Florini's (1999) definition, transparency is "the release of information by institutions that is relevant to evaluating those institutions." [15] Transparency in the democratic theory provides a key connection between the accountability of a government and the identifiability of the electorate. With transparency, the electorate is able to identify policy responsibility and, the most important thing, is that the electorate has the opportunity to make a clear prospective choice (Shugart and Carey 1992). As I have argued in chapter two, politicians in the more transparent political contexts are more likely to adopt policies closer to the median position. In the opposite, when voters have incomplete information regarding policymaking (lower transparency), politicians would like to adopt their preferred policies. But the problem is that politicians have the difficulty in identifying the median position of voters with respect to the exchange rate regime.

Frankle (1999) provides some interesting views. He argues that "no single regime is right for all countries" and "no single regime is right for all times (1999)." He considers that the criteria from the OCA theory, such as openness and the level of income, are the parameters to estimate the possible exchange rate regimes the governments would adopt. However, these parameters change in terms of government policy over time. Moreover, the political support for a specific regime is an important factor to judge the possible exchange rate regime choice. Still, it also changes over time. With these judgments, it is difficult to find a regime either flexible, fixed, or intermediate regime that is always supported by the median voters. Regarding fiscal policy

[15] I emphasize transparency between elected governments and electorates in this chapter. The concept of transparency actually has multiple definitions, depending on the delegation in democracy. Stasavage (2003), for example, looks at the delegation between elected politicians and bureaucrats. In his work, he concerns how the transparency of bureaucratic activities (central bank) affects economic outcomes.

and monetary policy, the preference of median voters is between two extremely right-leftist voters. We assume that median voters will neither prefer extremely expansionary nor contractionary fiscal and monetary policies. They, instead, support the fiscal and monetary discipline. Unlike fiscal policy and monetary policy, the median voters have no obvious preference over exchange rate regimes. Instead, the visible partisan mark of the ruling party is an important inference. The public expects that left governments would like to adopt the more flexible regimes and right governments would prefer the opposite, given economic conditions suggested by the OCA. Whether all of the expectations above come true depends on the transparency in a political context.

There is no reason, however, to assume that politicians in democratic governments are willing to always disclose information. Politicians may choose to disclose information, when the information makes them look good and is contributive to their elections. But it is not always the case that information is positive. Furthermore, politicians can reach their bliss policy in an environment with ambiguous information regarding policy-making as the model in Chapter two demonstrates. Therefore, the assumption that politicians in democratic governments are willing to disclose information is not appropriate. Instead, extant literature finds that political institutions affect politicians' incentives to disclose information and offer electorates the access to identify political responsibility (Powell and Whitten 1993; Samuel 2004; Helling and Samuel 2008). As I examined in chapter two, we consider the impact of divided governments and different governmental forms on the choice of exchange rate regimes.

In general, presidential systems are more transparent than parliamentary systems, because a president is directly elected by voters (Shugart and Carey 1992) and the president should take the most policy responsibility. But this principle itself is not universally accepted. Linz (1984)

argues that even though a directly elected president establishes a stable executive, disciplined party and a prime minister, who represents a majority in a parliament, tends to function similarly as presidential regimes. Because of mass media, ministers become more independent and the degree of collegiality and the collective responsibility in governments increase as well. Moreover, the important point is that presidential systems cannot solve the problem of dual legitimacy as, she maintains, "no democratic principle exists to resolve dispute between the executive and the legislature about which of the two actually represents the will of the people (p.63)."

Regarding the exchange rate regime choice within two different governmental forms, I assert that because the executives can unilaterally choose their exchange rate regime without legislative approvals, [16] the elected presidents definitely should have more responsibility. Furthermore, ministers in parliamentary systems need the support from parliament, in order to implement policy, since the public cannot directly observe parliament's intention. Transparency regarding exchange rate regime choice must be lower in parliamentary systems. According to my argument of higher transparency leading to stronger partisan effects, I predict that the probability that the shifting exchange rate regime is higher in partisan governments that have been changed in presidential systems than in parliamentary systems. Again, as Hibbs' (1987 and 1988) and Oatley's (2004) argument concerning left governmental policy preference, I assume that the right governments had a pegged exchange rate regime and predict that the probability of shifting to more flexible regimes is higher, when right governments have been taken over by left governments in presidential systems than in parliamentary systems.

Thus my hypotheses appear below.

[16] Here I emphasize the choice of exchange rate regime and am assuming no central bank independence.

Hypothesis 4: When partisanship changes, the probability of the shifting exchange rate arrangement is higher in presidential systems relative to parliamentary systems.

Hypothesis 5: When political power shifts from right to left governments, the probability of shifting to more flexible regimes is higher in presidential systems relative to parliamentary systems.

Another political institution regarding partisan governments' behavior is electoral systems. Electoral systems not only directly determine the distribution of votes, but also indirectly influence the relationship between executive and legislative branches. I argue that a president in the presidential system is not affected by different electoral visions, when the policy is unilaterally determined,[17] because a president and a congress are inter-independent and the fixed terms protect them from political threats, when they have different policy preferences. I predict that the impact of the partisan change on monetary commitment in presidential systems with majoritarian systems is no different than ones in presidential systems with PR.

However, a parliamentary system is different. When a ruling party dominates a parliament, policy makers or the cabinet members must take full policy responsibility and must take full policy responsibility, which is easily observed by the public, thus, encouraging a higher level of transparency in policymaking process. Coalition governments, on the other hand, encounter party competition and bargaining. The public cannot directly observe their interaction. Transparency in this case is therefore lower. According to my argument that the lower

[17] The impact of electoral systems on monetary commitment is through the availability of substitutive fiscal policy. As Clark (2002) has argued, the substitution between a fixed exchange rate and an independent bank with a floating exchange rate ignores fiscal policy. If the incumbent is free to substitute fiscal policy for monetary policy, choosing a fixed exchange rate is a dominant strategy. His findings imply that unified governments should have a higher probability of adopting a fixed exchange rate than divided governments. In addition, unified governments should have less probability to switch to a more flexible exchange rate when partisan governments are replaced by left governments.

transparent property leads to stronger partisan effects, I predict that parliamentary systems with PR are more likely to respond to the partisan change in governments than parliamentary systems with majoritarian systems. In summation, my hypotheses appear below.

Hypothesis 6: The probability of shifting to more flexible regimes has no difference, when right governments have been taken over by left governments in presidential systems with PR compared with ones with majoritarian systems.

Hypothesis 7: The probability of shifting to more flexible regimes is higher, when right governments have been taken over by left governments in parliamentary systems with majoritarian systems than ones with PR.

In the last part, I estimate that the probability of the exchange rate regime changes in developed and developing countries according to partisan variables. The main purpose in testing this condition is to test the two conflicting arguments: the fixed exchange rate regime and the factor of central bank independence are institutional substitutes or complements. Political economists find that governments are usually short in the credible commitment to monetary policy (Kydland and Prescott 1977; Barro and Gordon 1983). The scenario of their research is that governments would like to commit to a low inflation rate first, but once private actors have formed their inflation expectations, governments are tempted to pursue a higher inflation policy, in order to boost national income, leading to the time-inconsistency problem. The critical loss in the time-inconsistency problem is that private actors anticipate the governments' cheating behavior and have an inflation bias; thus, inflation becomes higher, but national income does not significantly increase. Considerable research has provided instruments to solve the policy credibility problem. The use of the central bank independence (CBI) or exchange-rate pegs are

the main instruments to mitigate the time-inconsistency problem and establish policy commitment. With these two instruments, the conservative central banks will enact a low inflationary rate and, thus, the fixed exchange rate regimes will react in a manner that results in a domestic discipline imposing on monetary policy.

Broz (2002) provides a substitution hypothesis between the degree of transparency to the monetary commitment and the degree of transparency in the political system. He argues that since asymmetric information between the public and policymaker is the main cause of the time inconsistency problem, the transparency of an institutional instrument can substitute for political system transparency to assist in reducing inflation bias. Therefore, because an exchange-rate peg is more easily observed than CBI, opaque political systems are more likely to peg than transparent systems. Bernhard, Broz, and Clark (2002) use 76 countries as samples to test the combination of both institutions. They find that "countries that delegated policy to an independent central bank have pursued a variety of exchange rate options." Switzerland, the United States, Mexico, and South Africa have floating exchange rates; Austria, the Netherlands, Taiwan, and Malaysia have had pegged exchange rates for long periods of time. That is, whether their institutions are institutional substitutes or complements still is in question.

Because there is no reliable index to measure the level of CBI for developing countries, I would like to use developed and developing countries, instead of the index of CBI. Since developed countries share the characteristics of higher levels of CBI and transparency in political systems, we can empirically test the institutional substitutes or complements with the samples from developed and developing countries.

Since CBI and the fixed exchange rates are the institutional solutions to the problem of time-inconsistency in monetary policy, we can expect some possible correlation between the two

institutions. If these institutions are substitutes, countries who adopt one instrument will not adopt another. That is, developed countries with higher level of transparency are more likely to adopt CBI as their instruments to solve the problem of time inconsistency and, thus, are more likely to move their exchange rates toward flexible regimes. Developing countries with less transparent political systems and lower CBI should be less likely to move toward flexible regimes. On the other hand, if these institutions are complements, countries would like to choose both instruments. Then developed countries are less likely to move their exchange rate regimes toward flexible exchange rate regimes.

3.4 Sample, Data, and Model Specification

For testing my arguments, I use a data set comprising 81 democratic countries in the period of 1990 to 2009:[18] 17 industrial countries, 33 emerging market, and 31 developing countries listed in Table 1 in the Appendix. I use the Polity IV database to define the democratic countries. Polity IV is a widely used database to measure democracy,[19] including five attributes: competitiveness of executive recruitment, openness of executive recruitment, constraint that exists on the executive, regulation of political participation, and competitiveness of political participation. Its ranges are from -10 for an extreme autocracy to +10 for the most democratic states. Because Polity IV index is continuous and has a fast dynamic in every single year, in order to narrow my sample to real democracies, which I define as countries whose scores in the Polity IV database are above 5 in five consecutive years.[20] All my sample countries are listed in

[18] I drop United State from my sample countries because the exchange rate against dollar is one of my control variables. In addition I also drop the member countries in the Euro Union after 1998 because these countries have lost their authority over the arrangement of exchange rate regimes.

[19] Another widely used database is Freedom House. Bosin (2009) has evaluated the two datasets and finds the high correlations between databases.

[20] In Polity IV data base, the polity scores express the level of democracy from -10 (strong autocratic) to +10 (strong democratic). The Polity IV Project also converted the regime categories by polity scores, in which the

the Appendix. The main reason I choose this time period is due to the available data, from which IMF data on *de facto* exchange rate regimes is accessible. The descriptive statistics are contained in Table 2 in Appendix.

3.4.1 Dependent Variables

This chapter contains three different dependent variables. I use the probability of various exchange rate regimes, the probability of the regime change, and the probability of the regime change toward the more flexible regimes. The purpose of this investigation, which refers to the last model, is to observe and estimate, when a fixed exchange rate regime has been changed in democratic governments.

The first dependent variable can consist of diverse types of exchange rate regime. I regroup exchange rate regimes from the data of Bubula and Otker-Robe (2002) and IMF into a five-way classification scheme: Hard pegs, adjustable parties, crawls, managed floats, and independent floating to capture the variation of exchange rate. Then I code the five categories of regimes in terms of their flexibility, 1 through 5 to hard pegs, adjustable parties, crawls, managed floats, and independent floating, respectively.

The second dependent variable regards the change in the exchange rate regime. Based on the coding of the first dependent variable, the regime change is a dummy variable, in which I code 1, when *de facto* exchange rate regimes change, 0 for no change. The way to find regime change is to compute the difference of the exchange rate code. If the exchange rate code is different from the prior year, I code them as changed.

The third dependent variable is about the regime change toward more flexible regimes. This dependent variable is still a dummy variable, 1 for change toward flexible regime, 0 for no

project suggests "autocracies" are defined by the polity scores of -10 to -6, "anocracies" by -5 to +5, and "democracies" by +6 to +10.

change. I estimate the switch to more flexible regimes by computing the difference of exchange rate codes from the previous year. If the difference of codes of exchange rate regime from the previous year is greater than zero, I code them as a switch to more flexible regimes.

With these three dependent variables, I can estimate the probability of the adoption of a specific exchange rate, the probability of change in exchange rate, and the probability of breaking a commitment to more rigid exchange rate in terms of partisan effects and conditional partisan effects contingent upon political institutions.

3.4.2 Independent Variables

Despite different dependent variables in my models, my independent variables are similar, including the partisan effects and the political institutions. I decompose the partisan effects into the party orientation with respect to economic policy and the change in partisanship. For the party orientation, I use the World Bank's Database of Political Institutions (DPI), from which I code party orientation (PARTISAN) as 1 for right-wing, 2 for center, and 3 for left-wing. I also use a dummy variable (LEFT) to compare left governments to others. I use another dummy variable to catch the change in partisan (Δ PARTISAN). If the code of party orientation is different from the previous year, I define it as change and Δ Partisan is 1; otherwise, Δ Partisan is 0. I also look at how partisanship changes. I use two dummy variables, ΔPar_right and ΔPar_left, representing that ΔPar_right means power shift from left to right governments and ΔPar_left indicates power shift from right to left governments. I compute the difference of the code of party orientation from the previous year. If the difference is greater than 0, ΔPar_left is 1, otherwise, ΔPar_left is 0. If the difference is less than 0, ΔPar_right is 1; otherwise ΔPar_right is 0.

Political institutions include governmental forms and electoral systems. Government forms cover presidential and parliamentary systems and I use a dummy variable, PRESIDENT, to express presidential systems. Regarding the various governmental forms, I treat presidential and semi-presidential systems the same. The main reason I treat them the same is that both systems have presidential elections and previous research finds that presidential elections cause the executive branch's different behaviors comparative to the executive branches in parliamentary systems (Samuels and Shugart, 2010). The data of PRESIDENT is available from *Database of Political Institutions* (DPI) by the World Bank. Finally, I add the data of governmental forms from Cheibub's book (2007), when the data from DPI is missing. Regarding electoral systems, I use a dummy variable, PR, to represent electoral systems. When the country uses proportional representation as the electoral instrument for legislative election, PR is 1; otherwise, PR is 0. The data of PR still is available from DPI.

Drawing from the literature on determinants of exchange rate regimes and the change in policy, this paper uses economic and political variables as control variables. Economic control variables are mainly drawn from the theory of OCA. OCA theory argues that smaller and more open economies tend to favor fixed exchange rate regimes, whereas larger and less open countries are more likely to adopt floating regimes. In this paper I use the log of gross domestic product (GDP) to capture the size of the economy and the ratio of exports over GDP to measure economic openness. These variables are from the World Bank's World Development Index (WDI). I also control for national economy variables such as the real interest rate and inflation rate. In general, the countries with higher inflation rate are more likely to adopt the pegged exchange rate, in order to reduce inflation, such as what Argentina did in 1990. But because different countries have different patients for a high inflation rate (the high inflation for country

A is not necessarily for country B), I use the standard deviation of inflation rate as an estimator, instead of the inflation rate. A plausible conjecture is that economic shocks or unobservable factors will increase the probability to shift to more flexible or rigid regimes such as the string of currency crisis and trade and financial liberalization in 1990s and the beginning of 2000s. For simplicity, I use four subintervals indicated by five years for each period. Three dummy variables are included to capture the effect of the time period.

A political control variable is suggested by a veto-player approach (Tsebelis, 1995, 2002). The argument of veto-players is that the greater the number of veto-players, the stronger the status quo bias. Thus, I expect that the greater number of veto-players, the less instances of a switch of the exchange rate regime, regardless whether the switch is toward flexible or rigid regimes. The data of the number of veto-players is from DPI as well.

3.4.3 Model Specification

This chapter employs three different models regarding exchange rate regime choice, exchange rate regime change, and the regime change toward a more flexible regime with different independent variables for different research questions. The basic model is for exchange rate regime choice, from which I use the ordered logit regression model.

Model 1:

$$\Pr ob[regime_{i,t} = 1 \sim 5] = \alpha_0 + \alpha_1 Left_{i,t} + \alpha_2 Veto_{i,t} + \alpha_3 Inflation_{i,t-1} + \alpha_4 LogGDP_{i,t-1} + \alpha_5 ExportGDP_{i,t-1} + \alpha_6 Interest_{i,t-1} + \alpha_7 y9095_i + \alpha_8 y0105_i + \alpha_9 y0609_i$$

The second model marks exchange rate regime change. Because the dependent variable is a binary variable, I use the logited regression model in order to estimate the probability.

Model 2:

$$\Pr ob[regimechange_{i,t} = 1] = \beta_0 + \beta_1 \Delta Partisant_{i,t} + \beta_2 \Delta Par\_Right_{i,t} + \beta_3 \Delta Par\_Left_{i,t} + \beta_4 Veto_{i,t} + \beta_5 Inflation_{i,t-1} + \beta_6 LogGDP_{i,t-1} + \beta_7 ExportGDP_{i,t-1} + \beta_8 Interest_{i,t-1} + \beta_9 y9095_i + \beta_{10} y0105_i + \beta_{11} y0609_i$$

The third model concerns regime change toward a more flexible regime. Still, I employ the logit regression model in order to estimate the probability of the regime change toward a more flexible regime.

Model 3:

$$\Pr ob[flexchange_{i,t} = 1] = \gamma_0 + \gamma_1 \Delta Partisan_{i,t} t + \gamma_2 \Delta Par\_Right_{i,t} + \gamma_3 \Delta Par\_Left_{i,t} + \gamma_4 PR_{i,t} + \gamma_5 PR \times \Delta Partisan_{i,t} + \gamma_6 PR \times \Delta Par\_Left_{i,t} + \gamma_7 Veto_{i,t} + \gamma_8 Inflation_{i,t-1} + \gamma_9 LogGDP_{i,t-1} + \gamma_{10} ExportGDP_{i,t-1} + \gamma_{11} Interest_{i,t-1} + \gamma_{12} y9095_i + \gamma_{13} y0105_i + \gamma_{14} y0609_i$$

3.5 Analysis of Empirical Results

Table 1 is the statistical summary and table 2 is my sample of countries (see Appendix). The first result is for my basic model of exchange rate regime choice. Table 3 reports the results with three different models. I put all of my control variables in the model 1 and add LEFT in the model 2. The positive and statistically significant result of LEFT means that left governments significantly tend to choose the more flexible exchange rates as their exchange rate regimes. In model 3, I use another way to measure the partisan effect as my robust test. As predicted, I still get a statistically significant result consistent with my hypothesis 1, from which left governments do have the higher probability to adopt the more flexible exchange rate regimes.

The coefficient in the ordered logit regression model cannot be directly interpreted. I convert these coefficients into probability and list predicted probability in various exchange rate regimes in table 3 and figure 2 to compare the difference between left and right governments and between different types of regimes with the frequency, relative frequency, and predicted

probability of adopting the exchange rate regimes. We can find several trends from figure 2. First, right governments relative to left governments have higher probability for Hard Pegs (5.3% to 4.1%), Adjustable Parties (27.5% to 22.1%), and Crawls (17.3% to 15.7%). Second, left governments relative to right governments have higher adopting probability in Managed Floating (23.1% to 22.2%) and Independent Floating (34.9% to 24.5%).

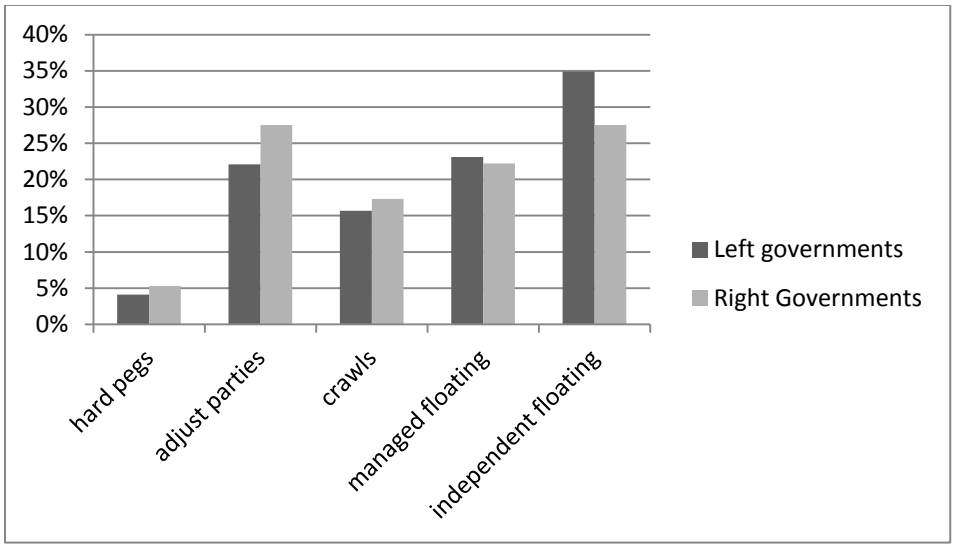

Figure 2: Predicted Probability of Adopting Exchange Rate Regimes

This finding is consistent with the observations from 1112 samples in table 3. The results in table 3 show that right governments relative to left governments are more likely to adopt hard pegs (9% to 3.5%), adjustable parties (26.3% to 25.6%) and crawls (18.7% to 15.8%). Left governments relative to right governments are more likely to adopt managed floating (25.2% to 20.3%) and independent floating (29.9% to 25.6%). Some of the percentage differences of predicted probability and relative frequency in the sample in adopting different exchange rate regimes between the left governments and the right governments do not appear significant. But the predicted probability and the relative frequency in the sample are consistent, indicating that left governments prefer flexible regime and right governments favor fixed regimes. It is important to know that the statistical tests show us that these differences are at a significant level,

even though the differences look small. Also, I use two different measurements of partisanship and get the same positive results at significant levels, indicating that partisanship does have an impact on the choice of exchange rate regimes.

Table 3: Frequency and Relative Frequency of Exchange Rate Regimes in Partisan Governments

	Right Governments	Left Governments
Hard Pegs	56 (9%)	17 (3.5%)
Adjustable Parties	163 (26.3%)	126 (25.6%)
Crawls	116 (18.7%)	78 (15.8%)
Managed Floating	126 (20.3%)	124 (25.2%)
Independent Floating	159 (25.6%)	147 (29.9%)
Total	620	492

* the number in each cell is frequency and in the parentheses is relative frequency.

Based on the first model, we can progress further by posing the following question: when partisan governments have changed, how is the exchange rate arrangement changed? I attempt to answer this question in two different ways. First, how does partisan change directly contribute to the change in the exchange rate arrangement? According to my hypothesis 2, I expect that the change in partisanship should be compatible with the change in the exchange rate arrangement. With hypothesis 1 and 2, we should observe that when right governments are replaced by left governments, new governments should switch their exchange rate arrangement to a more flexible one. Table 4 and table 5 report the test results. From model 5 in table 5, we do find that the change in partisan has a significant effect on changing exchange rate arrangements. But an

interesting phenomenon appears in table 5. The impact of the change in partisan is only effective, when right governments are replaced. When political power is transferred to right governments, new governments are less likely to change their exchange rate arrangements according to what the result of model 6 in table 5 shows. Furthermore table 5 shows a more detailed result of the test on the partisan change on the way exchange rate arrangement changes. With the results of model 7 in table 5 and model 10 in table 6, we have strong confidence to claim that partisan effects do have a strong influence on the exchange rate arrangement.

In addition, I attempt to answer the question about the relationship between the partisan change and the exchange rate arrangement by conditional partisan effects. I believe that partisan effects are strongly conditioned by political institutions, because different political institutions provide a different level of information to the public. Here, I estimate the conditional partisan effects in different governmental forms, in developed and developing countries, and different electoral systems.

Table 7 and table 8 report the results regarding the conditional partisan effects in different governmental forms. Comparing the coefficient of partisan change in presidential and parliamentary systems, the coefficient of variable of the ΔPARTISAN is higher in presidential countries than parliamentary countries. For testing whether their difference is significant, I do a Chow test with Stata. A Chow test is simply a test of whether the coefficients estimated over one group of the data are equal to the coefficients estimated over another. The test results show the difference is not at a significant level;[21] that is, the impact of partisan change is no different between presidential systems than parliamentary systems. But the results in table 8 are different. The coefficient of ΔPAR_LEFT is significant and the Chow test shows that their difference is at

[21] The result of the Chow test shows that F test is not significant at 5% level. That means the coefficients in the two groups are not significantly different.

a significant level. Therefore, countries with parliamentary systems are more likely to adopt flexible exchange rate regimes and countries with presidential systems are more sensitive to the change of partisan governments. The empirical tests support my hypothesis 5 regarding conditional partisan effects in different governmental forms. In summation, partisan effects not only have an impact on the change in the exchange rate regime, but also are contingent upon political institutions.

The results in table 9 support the institutional substitute argument. Developed countries do have the higher probability (25%) of switching their exchange rate arrangements toward the more flexible ones, when their partisanship is changed and when left governments take over (26.8%) than in developing countries.[22] Also, the Chow test results (not report) show that their differences are at a statistically significant level. These results have several implications. First, given economic conditions, left governments in developed countries are more likely to abandon their pegged exchange rate regimes than left governments in developing countries (13.7% to 12.3%). But it does not imply that left governments in developed countries are more likely to suffer from speculative attacks, because economic conditions are usually better in developed countries than in developing countries. Second, the empirical results in table 9 also show that given the level of CBI, the conditional partisan effects in the manner and measure of change in the exchange rate regimes are still effective, because developing countries are still willing to change their exchange rate regime at a statistically significant level, when partisan is changed. Thus, these models behave as robust test models.

The last two hypotheses concern the conditional partisan effects in different electoral systems. Because the impact of electoral systems is conditioning governmental forms, I still put

[22] Logited coefficients are in log-odds units and cannot be read as regular OLS coefficients. To interpret the results we need to estimate the predicted probabilities in table 13 and 14.

electoral systems in different government contexts. As my hypothesis 6 predicts, the electoral systems in presidential systems have no impact on the probability in shifting regimes toward the more flexible ones, because the interaction terms in table 10 between PR and the partisan change, and between PR and the partisan change to the left are both statistically insignificant. The empirical evidence for my hypothesis 7, however, is mixed. The interaction term between the partisan change and PR is statistically insignificant, but the interaction term between the partisan change toward left and PR is statistically significant in parliamentary systems. The mixed empirical results are not easy to interpret. Perhaps we need more variables to specify the conditional partisan effects in parliamentary systems with different electoral systems.

I list the frequency of change in partisan government and change in exchange rate regime in Table 11. In the table, we can find that 56.9% (157 out of 276) of the changes in exchange rate regimes come from the change in partisan governments. Moreover, in table 12, I list the frequency and relative frequency of the change in partisan governments and of the change in exchange rate regime from my samples. Table 12 reveals that the changes in partisan governments do affect the choice of exchange rate regimes. When the governments have adopted flexible regimes and when partisanship changes, new left governments relative to new right governments are more likely to maintain flexible regimes (55.9% to 51.2%). When the governments have adopted pegged regimes and when governments' ideology change, new right governments relative to new left governments have more willingness to maintain pegged regimes (36.5% to 35.6%). The small difference in maintaining pegged regimes indicates that partisan effects on maintaining pegged regimes may be insignificant. The phenomenon that governments shift their exchange rate regime toward pegged regime is more obvious (7.3% to 3.8%), when left governments change to right governments. This result is consistent with my argument as well.

Table 11: The Frequency of the Change in Partisan Governments and the Change in Exchange Rate Regimes

		Change in Partisan Governments	
		No Change	Change
Change in Exchange Rate Regimes	No Change	811	358
	Change	119	157

Table 12: The Frequency and Relative Frequency of the Change in Partisan Governments and the Change in Exchange Rate Regimes

	Right governments to Left governments	Left governments to Right governments
Pegged to flexible regimes	18 (4.6%)	2 (4.9%)
Flexible to pegged regimes	15(3.8%)	3(7.3%)
Maintaining pegged regimes	139 (35.6%)	15 (36.5%)
Maintaining flexible regimes	218 (55.9%)	21 (51.2%)
Total	390	41

More specifically, I will list the predicted probability to see the probability of the change in exchange rate regimes under different conditions. Below, I list the predicted probabilities in two tables. Table 13 regards the probability of the change in exchange rate regimes. Table 14 demonstrates the probability of the change in exchange rate regimes toward flexible ones.

Table 13: Predicted Probability of the Change in Exchange Rate Regimes

	Partisan Change		Change toward Right Governments		Change toward Left Governments	
	No	Yes	No	Yes	No	Yes
All Sample Countries	12.7%	25.8%	17.1%	15.4%	12.8%	26.8%
Presidential Systems	13%	24.6%	17.2%	15.9%	13.1%	25.5%
Parliamentary Systems	12.2%	27.6%	17.1%	15%	12.4%	29.3%
Developed Countries	12.1%	27.3%	16.2%	15.2%	12.5%	28.9%
Developing Countries	21.8%	25.4%	17.4%	15.5%	12.9%	26.4%

Table 14: Predicted Probability of the Change toward the More Floating Regimes

	Partisan Change		Change toward Right Governments		Change toward Left Governments	
	No	Yes	No	Yes	No	Yes
All Sample Countries	6.6%	19.2%	10.8%	12.8%	6.9%	19.9%
Presidential Systems	6.7%	18.1%	10.7%	13.6%	6.9%	18.6%
Parliamentary Systems	6.6%	21.1%	11.1%	12.2%	6.9%	22.3%
Developed Countries	7.5%	25%	11.2%	13.7%	7.9%	26.8%
Developing Countries	6.4%	18.1%	10.5%	12.3%	6.6%	18.7%

The two tables reveal some implications. First, developed countries have more a stable exchange rate policy, if partisan governments do not change. As table 13 shows, developed countries have a 12.1% probability to change their exchange rate regime, when partisan governments are the same. But developing countries have a 21.8% probability to change their

regimes. Second, when partisan governments have been changed, the probability of change in exchange rate regime significantly increases. The probability in developed countries increases to 27.3%, which is higher than in developing countries' 25.4%.

Table 14 shows the probability of change in fixed exchange rate regimes. According to the results in the table we find that developed countries and the democratic governments with parliamentary systems are potential candidates to abandon fixed exchange rate regimes. Parliamentary countries have a 21.1% probability to change fixed exchange rate regime, when partisan governments change, while presidential countries have only an 18.1% probability. When left governments take over, parliamentary countries have a 22.3% probability relative to 18.6% in presidential countries to change fixed exchange rate regime. Comparing developed and developing countries, developed countries have the higher probability to change fixed exchange rate regimes than in developing countries. Developed countries have a 25% probability to change fixed exchange rate regimes relative to an 18.1% probability in developing countries under the condition where partisan governments change. This finding is also consistent with Husain, Mody, and Rogoff's (2005) argument that developed countries are usually richer and more financially developed, so they appear to benefit more from more flexible regimes. I list the frequency and relative frequency of exchange rate regimes in developed and developing countries from 1990 to 2009 in table 15. In the table, developed countries relative to developing countries do have higher percentages of independent floating regime (31.4% to 15.5%) and developing countries have higher percentages of hard pegs regime (11.9% to 7.6%).

Table 15: The Frequency and the Relative Frequency of Exchange Rate Regimes in Developed and Developing Countries from 1990 to 2009

	Developed Countries	Developing Countries
Hard Pegs	68 (7.6%)	64 (11.9%)
Adjustable Parties	227 (25.4%)	139 (25.9%)
Crawls	140 (15.7%)	83 (15.4%)
Managed Floats	178 (19.9%)	167 (31.2%)
Independent Floating	280 (31.4%)	83 (15.5%)
Total	893	536

3.6 Concluding Remarks

This chapter investigates the question of why and when democratic governments change their exchange rate regimes. Some findings are quite different from previous literature. First, partisan effects play an important role in shaping governments' exchange rate policy. Here, I find that not only party orientation, but also the change in partisanship affects the exchange rate choice. Second, partisan effects are contingent upon political institutions. That means the extent to which partisan effects affect the exchange rate arrangement is different in different political contexts. I find that partisan effects on monetary commitment are stronger in parliamentary systems and in developed countries. This finding can apply to many future studies. Based on this finding, we might find the relationship between political institutions and an exchange rate fluctuation. Also, we might discover the relationship between political institutions and the probability of speculative attacks. That is the subject of the next chapter.

Appendix

Table 2: Statistical Summary

Variables	Observation	Mean	Std. Deviation	Min	Max
EX_Regime	1429	3.308	1.331	1	5
EX_Change	1445	.191	.393	0	1
EX_Flex	1445	.132	.339	0	1
Left	1115	.443	.497	0	1
Partisan	1569	.0006	.794	-1	1
ΔPartisan	1445	.356	.479	0	1
ΔPar_Left	1445	.327	.469	0	1
ΔPar_Right	1445	.029	.168	0	1
PR	1407	.766	.423	0	1
PR×ΔPartisan	1407	.249	.432	0	1
PR×ΔPar_Left	1407	.226	.418	0	1
Veto-Player	1400	3.749	1.734	1	18
Inflation	1398	.002	269.38	-527.521	6954.284
LogGDP	1438	24.232	2.068	19.527	29.291
ExportGDP	1421	36.921	18.209	6.566	127.553
Interest	1288	.082	.165	-.976	3.743
Y9095	1445	.295	.456	0	1
Y0105	1445	.249	.432	0	1
Y0609	1445	.193	.395	0	1

Table 3: Sample Countries

17 Industrial Countries

Austria	Belgium	Canada	Denmark	Finland
France	Germany	Greece	Iceland	Ireland
Italy	Netherlands	Norway	Portugal	Spain
Sweden	UK			

33 Emerging Market

Argentina	Bangladesh	Botswana	Brazil	Bulgaria
Chile	Colombia	Czech Rep.	Ecuador	Estonia
Hungary	India	Indonesia	Israel	Latvia
Lithuania	Mauritius	Mexico	Pakistan	Peru
Philippines	Poland	Romania	Slovak Rep.	Slovenia
South Africa	South Korea	Sri Lanka	Thailand	Turkey
Ukraine	Uruguay	Venezuela		

31 Developing Countries

Albania	Armenia	Benin	Bolivia	Costa Rica
Croatia	Cyprus	Dominican Rep.	El Salvador	Fiji
Gambia	Guatemala	Guyana	Honduras	Jamaica
Macedonia	Madagascar	Malawi	Mali	Moldova
Mongolia	Mozambique	Namibia	Nepal	Nicaragua
Panama	Paraguay	Solomon Island	Trinidad	Zambia

Table 4: The Partisan Effect on the Exchange Rate Regime Choice

	Model 1	Model 2	Model 3
Left		.389***	
		(.124)	
Partisan			.221***
			(.064)
Veto-Player	-.096***	-.124***	-.101***
	(.029)	(.032)	(.029)
Inflation	.0008*	.0009	.0009*
	(.0004)	(.0007)	(.0004)
GDP	.236***	.233***	.239***
	(.03)	(.036)	(.03)
ExportGDP	-.029***	-.033***	-.029***
	(.003)	(.004)	(.003)
Interest Rate	1.145***	.568	1.191**
	(.438)	(.525)	(.439)
Y9095	-.308**	-.325**	-.274*
	(.148)	(.164)	(.148)
Y0105	.831***	1.136***	.824***
	(.147)	(.168)	(.146)
Y0609	.421**	.727***	.391**
	(.155)	(.182)	(.155)
Observation	1174	1173	1174
Pseudo R^2	0.06	0.08	0.07

Table 5: The Change in Exchange Rate Regime

	Model 4	Model 5	Model 6	Model 7
Δ Partisan		.902***		
		(.167)		
ΔPar_right			-.04	
			(.472)	
ΔPar_left				.943***
				(.169)
Veto-Player	-.113*	-.097*	-.112*	-.088
	(.059)	(.059)	(.059)	(.059)
Inflation	.002**	.002**	.002**	.002**
	(.001)	(.001)	(.001)	(.001)
GDP	-.11**	-.091**	-.11**	-.088*
	(.045)	(.046)	(.045)	(.046)
ExportGDP	-.003	-.003	-.003	-.003
	(.005)	(.004)	(.004)	(.004)
Interest Rate	-.173	.164	-.172	.191
	(.735)	(.729)	(.735)	(.734)
Y9095	1.023***	.955***	1.024***	.961***
	(.208)	(.211)	(.208)	(.212)
Y0105	-.322	-.396	-.322	-.404
	(.251)	(.255)	(.251)	(.255)
Y0609	.026	-.108	.027	-.102
	(.283)	(.289)	(.283)	(.289)
Constant	1.365	.521	1.363	.423
	(1.152)	(1.179)	(1.152)	(1.182)
Observation	1176	1176	1176	1176
Pseudo R^2	0.07	0.1	0.07	0.1

Table 6: The Change toward the more Floating Exchange Rate Regimes

	Model 8	Model 9	Model 10
Δ Partisan	1.267*** (.203)		
ΔPar_right		.239 (.518)	
ΔPar_left			1.275*** (.204)
Veto-Player	-.118 (.072)	-.144** (.073)	-.106 (.073)
Inflation	.0004 (.0003)	.0003 (.0002)	.0004 (.0003)
GDP	-.013 (.055)	-.042 (.053)	-.01 (.055)
ExportGDP	-.005 (.006)	-.005 (.006)	-.005 (.006)
Interest Rate	.974 (.794)	.462 (.794)	1.011 (.799)
Y9095	1.073** (.245)	1.161*** (.238)	1.082*** (.245)
Y0105	-.643** (.319)	-.522* (.313)	-.652** (.319)
Y0609	-1.432*** (.503)	-1.207** (.498)	-1.42*** (.503)
Constant	-1.945	-.602 (1.352)	-2 (1.405)
Observation	1176	1176	1176
Pseudo R^2	0.14	0.10	0.15

Table 7: The Change in Exchange Rate Regime in Different Government Forms

	Presidential Systems			Parliamentary		
Δ Partisan	.912***			.811***		
	(.216)			(.295)		
ΔPar_right		-.099			-.089	
		(.687)			(.703)	
ΔPar_left			.943***			.863***
			(.217)			(.301)
Veto-Player	-.033	-.049	-.023	-.182	-.199*	-.18
	(.08)	(.078)	(.081)	(.114)	(.115)	(.114)
Inflation	.002**	.002*	.002**	.071***	.077***	.073***
	(.001)	(.001)	(.001)	(.022)	(.022)	(.022)
GDP	-.181***	-.17**	-.181***	.041	.003	.048
	(.069)	(.067)	(.069)	(.077)	(.075)	(.077)
ExportGDP	-.017**	-.015**	-.017**	.014	.013	.014
	(.006)	(.006)	(.006)	(.009)	(.009)	(.009)
Interest Rate	-1.098	-1.529*	-1.089	10.958***	11.837***	11.266***
	(.805)	(.807)	(.809)	(3.09)	(3.098)	(3.101)
Y9095	.628**	.703***	.649**	1.2***	1.297***	1.19
	(.272)	(.267)	(.272)	(.383)	(.379)	(.384)
Y0105	-.711**	-.639**	-.711**	.445	.569	.445
	(.322)	(.316)	(.322)	(.451)	(.445)	(.451)
Y0609	.015	.102	.009	-.481	-.254	-.474
	(.332)	(.326)	(.332)	(.7)	(.689)	(.702)
Constant	3.292*	3.405**	3.247*	-4.308**	-3.104	-4.481**
	(1.712)	(1.683)	(1.718)	(2.076)	(2.011)	(2.085)
Observation	696	696	696	480	480	480
Pseudo R^2	0.12	0.09	0.12	0.17	0.15	0.17

Table 8: The Change toward the more Flexible Exchange Rate Regimes in Different Government Forms

	Presidential Systems			Parliamentary		
Δ Partisan	1.28***			1.22***		
	(.265)			(.339)		
ΔPar_right		.51			-.115	
		(.692)			(.823)	
ΔPar_left			1.242***			1.278***
			(.264)			(.341)
Veto-Player	-.077	-.101	-.064	-.174	-.196	-.169
	(.096)	(.094)	(.096)	(.13)	(.131)	(.13)
Inflation	.0002	.0001	.0002	.009	.019	.011
	(.0003)	(.0002)	(.0003)	(.022)	(.021)	(.023)
GDP	-.085	-.086	-.086	.07	.013	.075
	(.081)	(.079)	(.081)	(.089)	(.085)	(.089)
ExportGDP	-.018**	-.017**	-.018**	.012	.008	.011
	(.008)	(.008)	(.008)	(.011)	(.011)	(.01)
Interest Rate	.007	-.624	.013	7.047**	8.202**	7.447**
	(.839)	(.832)	(.847)	(3.324)	(3.323)	(3.37)
Y9095	.543*	.621**	.577*	1.943***	2.042***	1.918***
	(.308)	(.299)	(.307)	(.485)	(.479)	(.488)
Y0105	-.95**	-.813**	-.937**	.104	.287	.094
	(.384)	(.375)	(.383)	(.612)	(.603)	(.614)
Y0609	-1.547***	-1.347**	-1.541***	-1.072	-.755	-1.04
	(.569)	(.562)	(.569)	(1.113)	(1.105)	(1.114)
Constant	.506	1.136	.541	-5.543**	-3.617	-5.646
	(1.997)	(1.955)	(1.995)	(2.366)	(2.255)	(2.361)
Observation	696	696	696	480	480	480
Pseudo R^2	0.14	0.09	0.13	0.21	0.17	0.21

Table 9: The Change toward the more Flexible Exchange Rate Regimes in Developed and Developing Countries

	Developed Countries			Developing Countries		
Δ Partisan	2.32*** (.58)			.988*** (.221)		
ΔPar_right		-1.492 (1.487)			.477 (.592)	
ΔPar_left			2.819*** (.634)			.946*** (.221)
Veto-Player	.291 (.177)	.245 (.161)	.356* (.192)	-.156* (.08)	-.178** (.081)	-.151* (.081)
Inflation	.608*** (.169)	.62*** (.142)	.645*** (.183)	.0003 (.0002)	.0002 (.0002)	.0003 (.0002)
GDP	.455 (.293)	.261 (.237)	.469 (.325)	.068 (.071)	.038 (.07)	.064 (.071)
ExportGDP	.026 (.022)	.022 (.019)	.027 (.024)	-.003 (.006)	-.004 (.006)	-.004 (.006)
Interest Rate	36.554*** (10.914)	33.263*** (10.552)	41.395*** (11.967)	.795 (.771)	.392 (.771)	.742 (.778)
Y9095	.728 (1.181)	1.051 (1.128)	.291 (1.231)	.892*** (.269)	.948*** (.264)	.901*** (.268)
Y0105	1.924 (1.319)	1.478 (1.271)	1.833 (1.296)	-.869*** (.334)	-.759** (.329)	-.862*** (.334)
Y0609				-1.051*** (.395)	-.901** (.39)	-1.038*** (.394)
Constant	-21.447** (8.909)	-14.784** (7.054)	-23.047** (9.875)	-.3443** (1.757)	-2.248 (1.714)	-3.309* (1.751)
Observation	248	248	248	954	954	954
Pseudo R^2	0.44	0.34	0.48	0.11	0.08	0.11

Table 10: The Change toward the more Flexible Exchange Rate Regimes in Different Government Forms with Different Electoral Systems

	Presidential Systems				Parliamentary Systems			
Δ Partisan	1.207***	1.287**			1.243***	.585		
	(.257)	(.603)			(.33)	(.487)		
Δ Partisan*PR		-.076				1.035		
		(.671)				(.691)		
ΔPar_left			1.171***	1.493**			1.32***	.574
			(.256)	(.617)			(.332)	(.481)
ΔPar_left*PR				-.379				1.311*
				(.686)				(.706)
PR		-.476		-.339		-.82*		-.823*
		(.464)		(.459)		(.497)		(.481)
Veto-Player	-.083	-.068	-.071	-.053	-.091	-.041	-.088	-.042
	(.095)	(.095)	(.095)	(.095)	(.114)	(.117)	(.114)	(.118)
Inflation	.0002	.0004	.0002	.0004	.012	.056**	.014	.058**
	(.0003)	(.0004)	(.0003)	(.0004)	(.021)	(.024)	(.022)	(.024)
GDP	-.086	-.044	-.086	-.042	.021	.06	.028	.057
	(.078)	(.078)	(.078)	(.079)	(.085)	(1)	(.085)	(.101)
ExportGDP	-.016**	-.015*	-.016**	-.015*	.009	.011	.008	.008
	(.008)	(.008)	(.008)	(.008)	(.1)	(.011)	(.009)	(.011)
Interest Rate	.109	.376	.12	.293	7.957**	13.282***	8.218***	13.614***
	(.834)	(.868)	(.842)	(.888)	(3.189)	(3.75)	(3.262)	(3.786)
Y9095	.558*	.481	.589*	.512*	1.971***	1.813***	1.948***	1.743***
	(.306)	(.311)	(.305)	(.31)	(.486)	(.496)	(.489)	(.053)
Y0105	-.923**	-.898**	-.911**	-.886**	.16	.392	.147	.379
	(.382)	(.382)	(.382)	(.382)	(.611)	(.624)	(.613)	(.621)
Y0609	-1.155**	-1.123**	-1.143**	-1.104**	-.088	.098	-.087	.06
	(.46)	(.461)	(.459)	(.459)	(.744)	(.753)	(.745)	(.754)
Constant	.468	-.247	.486	-.403	-4.697**	-5.834**	-4.835**	-5.641**
	(1.919)	(1.952)	(1.918)	(1.969)	(2.267)	(2.741)	(2.269)	(2.752)
Observation	729	725	729	725	500	488	500	500
Pseudo R^2	0.12	0.12	0.12	0.12	0.20	0.22	0.21	0.23

Chapter 4

Political Institutions and the Probability of Speculative Attacks

4.1 Introduction

This chapter follows the previous two chapters and poses the following question: How do political institutions affect the probability of speculative attacks? Extant literature has explored the impact of political institutions on speculative attacks through different perspectives. Many emphasize the strength of government (Shimpalee and Breuer 2006; Chiu and Willett 2009). Some uncover the relationship between political institutions and exchange rate regime choices (Leblang 1999; Bernhard and Leblang 1999) based on the research that exchange rate regime is an important factor in the probability of speculative attacks. Others argue that information matters in speculators' beliefs (Leblang and Satyanath 2006, 2008).[23] In extant literature, the role of political institutions associates with policy making and the dissemination of information, such as divided governments, in which the incumbent government cannot chooses its desired policy and the institution increases the variation of expectations held by speculators, thereby, increasing the probability of crises.

The main drawback in the extant literature is that they ignore the impact of partisanship in decision-making. Extending the conditional partisan model in Chapter two, I examine the partisan effect on the probability of speculative attacks through different political contexts. In this chapter, I explore the link between political institutions, economic fundamentals, the willing to maintain pegged exchange rate regimes, and speculative attacks by extending what I have found in the previous two chapters. Based on the theory of currency crises, I argue that left

[23] They extend Morris and Shin's model (1998) and say "an increase in the extent of speculators' uncertainty over other speculators' beliefs about the state of fundamentals increases the probability of a currency crisis independent of the state of fundamentals. (p.248)"

governments in divided governments or with parliamentary systems would have a higher probability of speculative attacks, because the likelihood of an inconsistent policy is higher under these conditions. Extending this argument to the findings in Chapter three, I argue that when power is transferred to another partisan government, the probability of speculative attacks is higher, because the new left government is more likely to change its exchange rate regime.

This chapter is structured as follow. The next section is the literature review of the theory of currency crises. Section three contains my argument regarding the impact of political institutions on the probability of speculative attacks through the influence on economic fundamentals and monetary commitment. The next two sections are my empirical works. The last section consists of my discussion and conclusion.

4.2 The Theory of Speculative Attacks

Recent models of speculative attacks have focused on two crucial factors: the extent to which economic fundamentals affect the probability of currency crises and the interaction between the expectation of speculators and governments.[24] Krugman (1979) and Flood and Garber (1984) find that there is a policy inconsistency between monetary and fiscal policy and that the sustaining of pegged exchange rate leads to balance-of-payments crises. Financing fiscal debt by monetary expansion increases devaluation pressure. Because international reserves are finite, once the losses have reached a certain level, the pegged exchange rate is unsustainable. The market loses confidence and crisis is anticipated. The second generation model raised by Obstfeld (1994 and 1996) provides another version. Economic fundamentals cannot solely

[24] The models regarding the influence of economic fundamentals are called the first generation of currency crisis models and another the second generation of currency crisis models. Some scholars propose the third generation models regarding the impact of the balance sheet of firms. However, the third generation models have not had a complete and organized core argument as the first and the second generation models. Some scholars, therefore, classify the impact of the balance sheet as the extension of the second generation model.

determine the probability of currency crises; moreover, fundamentals are one of the reasons influencing speculators' expectations to countries' capacity for maintaining the pegged exchange rate. As soon as countries were expected to be unlikely to the pegged exchange rate, speculators would attack countries' currency and then currency crises would follow. Accordingly currency crises have a feature of the "self- fulfilling" and causality interflowing between the fundamentals and market expectations also leads to the result of multiple equilibria; that is, speculation is motivated by many factors, not only by the economic fundamentals. Actually, despite two different arguments, the fundamentalist and self-fulfilling views are not mutually exclusive, as Jeanne said (2000) "For a currency to be vulnerable to self-fulfilling speculation, the fundamentals must first put it in a state of fragility." In other words, the role of fundamentals might not be an indicator of precise timing of a crisis as Krugman said, but the extent to which there is deterioration in the fundamentals makes the currency ripe for an attack.

While these models show poor macroeconomic fundamentals and market expectations as causes of currency crises, they leave open the question of the role of institutions. The deterioration in fundamentals is strongly associated with institutions. Not only may weak institutions contribute to poor macro-fundamentals, but also bad policies coincide with the bias from institutional designs. In addition, institutions signal market agents about future economic fundamentals, shaping market agents' expectations (Li and Inclan, 2001). Market agents might not be able to observe future economic fundamentals, but by observing policy credibility generated by institutions, policy-reform or policy-implement possibility, agents will shape their belief in terms of this political information. Indeed, there have been many works devoted to the political economy approach. [25] They concern the variables of cabinet duration, partisanship,

[25] Contributions include Freeman, Hays and Stix (2000), Leblang and Bernhard (2000), Bussiere and Mulder (2000), Leblang (2002), Block (2003), Leblang and Satyanath (2006), Chiu and Willett (2009).

election timing, electoral outcome, electoral institutions, central bank independence, government strength, and the composition of a parliament or a government. All these political considerations will affect governments' commitments to maintain the exchange rate and how markets evaluate the governments' commitment.

According to the previous literature, inconsistent policy and the commitment to maintain the exchange rate are very relevant to the probability of speculative attacks. This chapter examines the two issues by the conditional partisan model raised in Chapter two.

4.3 The Political Institutions and the Probability of Speculative Attacks

The main argument in this chapter follows what I have analyzed in the previous chapters. I argue that partisan effects on macroeconomic policy are significant, if the transparency of political institutions is low. In Chapter two, I found that left governments are more likely to have larger sizes of fiscal debt, when they are in divided governments and when governments have parliamentary systems. Moreover, left governments with presidential systems have a slower growth rate of money supply. The two institutional views regarding the sizes of fiscal debt and the growth rate of money supply imply that we should be able to observe inconsistent policy through political institutions. I have listed the predicted ratio of fiscal debt over GDP and predicted ratio of money supply over GDP in terms of political institutions in Chapter two. Here I show a graphic methods of incorporating the two ratios.

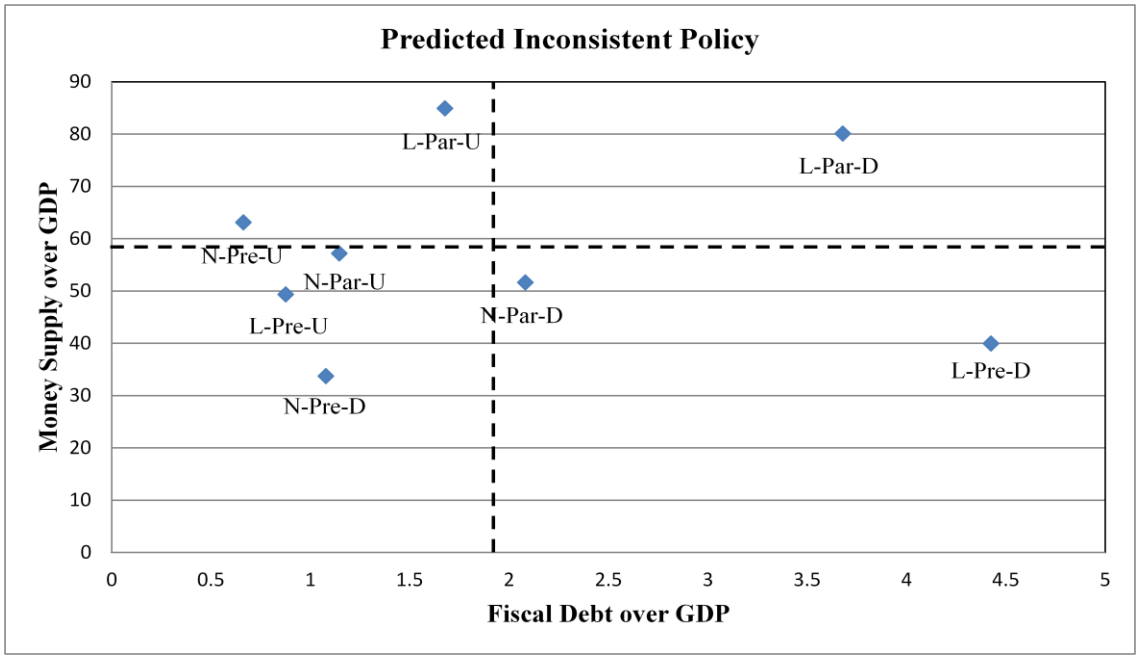

Figure 1: Predicted Inconsistent Policy

Figure 1 shows the coordinates of different political institutions in terms of their predicted ratio of fiscal debt and money supply over GDP. Each point in this graph represents government ideology and reflects the results of two institutions. The first is partisan effect, in which I use L for left governments and N for non-left governments. The second is governmental forms. Pre indicates presidential systems and Par means parliamentary systems. The last is divided/unified governments. D and U are divided governments and unified governments, respectively. With the two political institutions and government ideology, each point has its own identification. For example L-Par-U represents left government with parliamentary systems in a unified government. I also draw two dash lines to represent the average of the ratio in all the sample countries. The two dash lines divide all sample countries in four quadrants. If the sample countries are located in the first quadrant, the likelihood of inconsistent policy is the highest, because the samples in the quadrant have more fiscal debt and more money supply simultaneously. The likelihood of an inconsistent policy is the lowest in the third quadrant,

because the ratio of fiscal debt and money supply over GDP in the quadrant is relatively lower than others. Comparing the second and the forth quadrants, I argue that the risk of an inconsistent policy is higher in the forth quadrant. In the second quadrant, although the higher ratio of money supply over GDP conveys higher depreciation pressure, the lower fiscal debt in these sample countries could compensate for the pressure, reprieving the pressure of abandoning the pegged exchange regimes. The sample countries in the forth quadrant suffer from higher fiscal debt and have a higher pressure to depreciate their currency. Despite the lower ratio of money supply (but not much lower), the lower ratio still cannot compensate for the depreciation pressure.

Figure 1 indicates several meaningful implications. First, the variation of policy location of left governments is higher than the non-left governments. That is consistent with the fact that political institutions significantly affect the decision-making in left governments. The second implication projects the probability of speculative attacks. If we can predict the probability of an inconsistent policy in terms of the political institutions, we should be able to predict the probability of currency crises with the same criteria.

Regarding the partisan effects, we find that left governments do increase the risk of an inconsistent policy. Comparing N-Par-D and L-Par-D, N-Pre-D and L-Pre-D, and N-Par-U and L-Par-U[26], the results of the left governments reflect a tendency to be situated in the high risk area, leading to a higher probability of inconsistent policy. Thus, generating the following hypothesis:

H.1: Left governments are more likely to have the higher probability of speculative attacks.

Regarding the conditional partisan effects, I analyze partisan effects in divided governments and different governmental forms. In chapter 2, we have seen that when left

[26] Only L-Pre-U moves toward a risk low area then N-Pre-U.

governments are in divided governments, *ceteris paribus*, the partisan effect is stronger. AS fig 1 shows, L-Par-U (the second quadrant) moves toward L-Par-D (the first quadrant), and L-Pre-U (the third quadrant) moves toward L-Pre-D (the fourth quadrant), increasing the probability of inconsistent policy. Thus, producing the following hypothesis:

H.2: Left governments in divided governments are more likely to have a higher probability of speculative attacks than left governments in unified governments.

As I have argued in chapter two that presidential systems diminish the partisan effects, left governments with presidential systems should have less risk of an inconsistent policy than left governments with parliamentary systems. Fig 1 supports the argument and shows us that L-Pre-D locates in the less risk area than L-Par-D, and L-Pre-U to L-Par-U as well. Thus, yielding the following hypothesis:

H.3: Left governments with parliamentary systems are more likely to have a higher probability of speculative attacks than left governments with presidential systems.

Following the findings in Chapter three, when partisan governments change, especially in the case of power transfers to left governments, partisan governments are more likely to change their exchange rate regimes in relation to their partisan goals. Because the change in exchange rate regimes increases the uncertainty regarding economic fundamentals, we can expect that the change in partisan government should increase the probability of speculative attacks. This argument is very similar to what Leblang and Satyabath have argued (2006, 2008). Their argument is concerned with government turnover, from which this institutional change generates uncertainty in each speculator's belief. Based on their argument, I observe what happens to the change in partisan governments.[27] Since different partisan governments have different policy

[27] The change in partisan governments must be equivalent to government turnover, but government turnover is not necessary to change partisan governments.

preferences, the market will be uncertain about the final policy, when new partisan governments succeed to the throne. Thus the following hypothesis:

H.4: The change in partisan governments is more likely to increase the probability of speculative attacks.

4.4 Sample, Data, and Model Specification

In order to test my hypotheses, I use the same data set as in chapter 2 and 3, comprising 81 democratic countries in the period of 1990 to 2009[28], 17 industrial countries, 33 emerging market, and 31 developing countries listed in Table 1 in Appendix. The only difference is that I use monthly data, rather than annual data to catch the variation of exchange rate, international reserves, and interest rates.

4.4.1 Dependent Variables

My dependent variable is the probability of speculative attacks. In order to measure the probability of speculative attacks, I use the index of exchange market pressure (EMP) developed by Eichengreen, Rose, and Wyplosz (1996) to measure speculative attacks. EMP includes three components: the change in exchange rate, the change in reserves, and the change in interest rate. In my research, all of these variables are measured relative to Germany, if the countries are European countries, or to United States, if the countries are not in Europe. The EMP is defined as:

$$EMP_{i,t} \equiv [(\%\Delta e_{i,t}) + (\Delta(i_{i,t} - i_{G/U,t})) - (\%\Delta r_{i,t} - \%\Delta r_{G/U,t})]$$

[28] I drop United State from my sample countries because the exchange rate against dollar is one of my control variables. In addition I also drop the member countries in the Euro Union after 1998 because these countries have lost their authority over the arrangement of exchange rate regimes.

where $e_{i,t}$ denotes the price of country its currency at time t; $i_{G/U}$ denotes the short Germany/United States' interest rate; r denotes the ratio of international reserves. In Eichengreen, Rose, and Wyplosz's work, they construct a weighted average of these variables. But as Angkinand, Li, and Willett (2003) suggested, a weighted average based on precision weights is inappropriate for use in the calculation of indices of currency crises, because weights usually understate the severity of unsuccessful speculative attacks under pegged exchange rate. Accordingly, in this chapter I use equal weights to measure the probability of speculative attacks.

According to Eichengreen, Rose, and Wyplosz's work, I define speculative attacks by

$Attack_{i,t}$ =1 if $EMP_{i,t} > 1.5\sigma_{EMP} + \mu_{EMP}$

=0 otherwise

Where μ_{EMP} and σ_{EMP} are the sample mean and standard deviation of EMP, respectively.

4.4.2 Independent Variables

All of these independent variables are similar to what I have used in Chapter two and three. I use divided government (DIVIDED), presidential systems (PRESIDENT), and left government (LEFT) as major independent variables. Also I use their interaction term (LEFT× DIVIDED), (LEFT×PRESIDENT), and (LEFT×DIVIDED×PRESIDENT) to test my conditional partisan effect argument.

In this Chapter I control for two additional variables. First, I add the variable ELECTION as one control variable. Many works have suggested that speculators are more likely to attack after elections (Leblang and Bernhard 2000; Leblang 2002). Thus I add ELECTION and one lagged ELECTION as control variables. In addition, I also control the ratio of M2 over reserves,

interest rate and exchange rate regimes (hard pgs, adjustable parties, crawls, managed floating, and independent floating).

4.4.3 Model Specification

In order to access the interaction terms among left governments and political institutions, and the probability of speculative attacks, I use a logit panel regression model. Logit panel regression model is defined as:

$$prob(attack_{i,t} = 1) = \Phi[\beta_0 + \beta_1 LEFT_{i,t} + \beta_2 DIVIDED_{i,t} + \beta_3 PRESIDENT + \beta_4 LEFT \times DIVIDED_{i,t}$$

$$\beta_5 LEFT \times PRESIDENT_{i,t} + \beta_6 PRESIDENT \times DIVIDED_{i,t} + \beta_7 LEFT \times DIVIDED \times PRESIDENT_{i,t}$$

$$+ \beta_8 X_{i,t-1} + \varepsilon_{i,t}]$$

$Attack_{i,t}$ is a speculative attack dummy variable taking the value of 1 for country I at time t, and 0 if there is no speculative attack. Φ is the standard cumulative normal distribution. The control variables X are sets of economic and political variables and $\varepsilon_{i,t}$ is the error term. In order to avoid the problem of reverse causality, all of the control variables are lagged by one month.

4.5 Empirical Results

Table one is the statistical summary and Table two is my sample countries (see Appendix). Table three reports the results of my models. The first model investigates partisan effects on the probability of speculative attacks. The statistically significant result shows us that left governments have higher probability of speculative attacks (7.3%) than non-left governments (5%), supporting my first hypothesis. Model three and model five regard the conditional partisan effect on the probability of attacks. The statistically significant coefficient of the interaction term

of left governments and divided governments shows that left governments in divided governments have less probability of attacks than left governments in unified governments. This finding seems to be against my second hypothesis, but actually it is not. Partisanship is a fairly good index to predict what governments would do. Snowberg, Wolfers, and Zitzewitz (2007) examine American elections and find that markets have different anticipations over interest rates and price equality in terms of Democrat/Republican governments. The more information available to the market, the less the probability of speculative attacks to the market. Thus, the coefficient of the interaction term in model three is negative. Also, we can observe that the positive effect from the interaction term still cannot compensate for the negative effect from left governments and divided governments. The sum of the positive coefficient of left governments (.765) and divided governments (.916) is greater than the negative coefficient of the interaction term (-.921).[29] The result suggests that even though the market has more information regarding partisan governments' behavior, the negative economic impacts from left governments and divided governments significantly raise the probability of attacks. Thus, left governments in divided governments still have a higher probability of speculative attacks than left governments in unified governments, supporting my second hypothesis.

The interaction term in model five regarding left governments with presidential systems is not statistically significant, although the coefficient is consistent with what I predict in the third hypothesis. Comparing model four and model five, I find that left governments and presidential systems have different impacts on the probability of speculative attacks. Left governments tend to increase the probability (.208), but presidential systems tend to reduce the probability (-.21) of speculative attacks. The main reason is that presidential systems tend to

[29] The coefficient in logit model is odd-ratio rather than probability, so we cannot interpret the result directly. But we still can understand the impact of the coefficients on the probability of speculative attacks.

have less fiscal debt as many scholars have found (Persson and Tabellini 2003, 2004; Cheibub 2006; Persson, Roland, and Tabellini 2007). If we put left governments in the context of presidential systems, both factors offset each other, leading to the insignificant result. That is, even though the coefficient of the interaction term in model five is not significant, we still can indirectly argue that presidential systems reduce the negative impact from left governments.

Model seven tests H4 in which the change in partisan governments is more likely to increase the probability of speculative attacks. The result supports my hypothesis. The estimated coefficient (ΔPartisan) in model seven is statistically significant (1.395). In model six I estimate the interaction terms among left governments, divided governments and presidential systems. I would like to observe the variation of the probability within the interaction effects among the three variables. I also list the predicted probability of the probability of speculative attacks in various political institutions.

Table 4. The Predicted Probability of Speculative Attacks

	Non-Left governments (left=0)		Left governments (left=1)	
	Parliamentary Systems (president=0)	Presidential Systems (president=1)	Parliamentary Systems (president=0)	Presidential Systems (president=1)
Unified Governments (divided=0)	2.5%	3.2%	7.3%	6.1%
Divided Governments (divided=1)	7.6%	7%	8.9%	6.9%

Table 4 is the predicted probability of attacks in the various political institutions. As my H2 argues, left governments are more likely to suffer from speculative attacks. Comparing the probability in each cell, we can find that left governments always have higher probability of attacks than non-left governments. Moreover, under the condition of parliamentary systems, left governments in divided governments have higher probability of attack than in unified

governments by 1.6%. While left governments are associated with presidential systems, the probability increases 0.8% under divided governments. This table also shows that left governments with presidential systems have less probability of speculative attacks than governments with parliamentary systems. The probability of left governments with presidential systems is 6.1%, which is less than the probability of left government with parliamentary systems (7.3%) in unified governments. Under divided governments, left governments with presidential systems have a probability 6.9% which is less than the probability of left governments with parliamentary systems (8.9%).

I compare Figure 1 and Table 4, in order to test my political institutional argument on the probability of speculative attacks. Figure 2 is a graphic representation to depict the predicted probability of attacks and the predicted inconsistent policy.

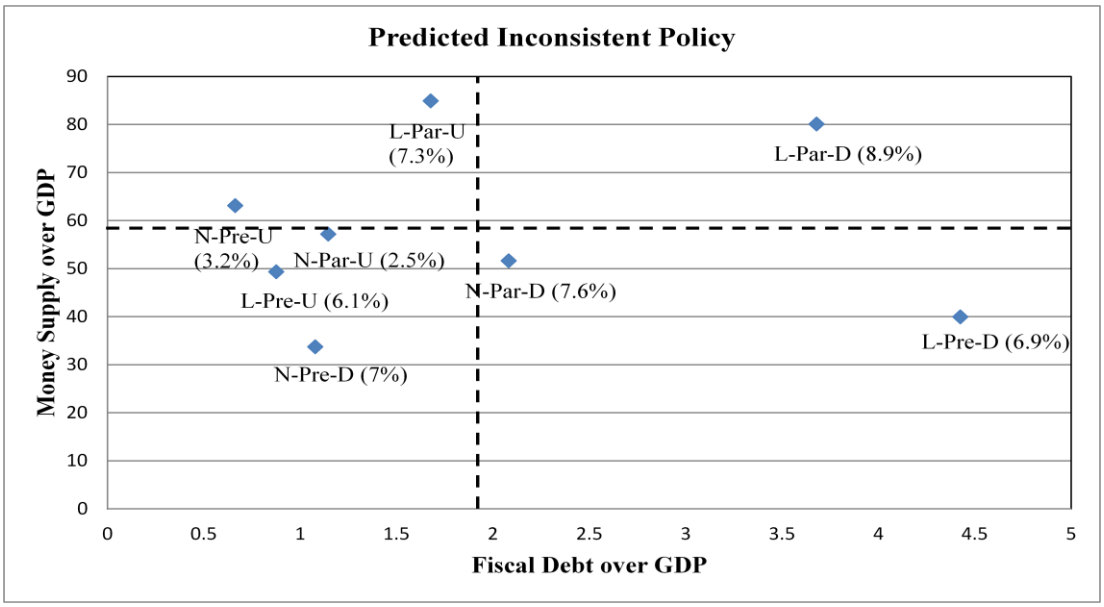

Figure 2: Predicted Inconsistent Policy and the Probability of Speculative Attacks

In general, the two predicted results are fairly consistent. L-Par-D, which is the most likely to have an inconsistent policy, has the highest probability of attacks. N-Par-D and L-Pre-D, located at the second high-risk area, do suffer from the high probability of speculative attacks.

Most of the sample countries, except for N-Pre-D and L-Pre-U, have relatively low probability in the third quadrant.

4.6 Discussion and Conclusion

Following the previous two chapters, this chapter tests the political institutional arguments of the probability of speculative attacks. Based on the first generation theory of speculative attacks (Krugman 1979; Flood and Garber 1984), the political institutions tending to adopt an inconsistent policy should have the higher probability of attacks. My empirical tests show that left governments increase the probability of speculative attacks and the tendency is more significant in the political context of divided governments. Regarding left governments with different government forms, however, we cannot observe significant impacts of presidential systems on the probability of attacks. Also, as Leblang (2003) states, the countries that are unwilling to maintain pegged exchange rate regimes are more likely to suffer from speculative attacks. As we find in chapter three, the change in partisan governments would increase the probability to shift to exchange rate regimes. The empirical test supports his argument and finds that the change in partisan governments does significantly increase the probability of attacks.

The empirical results in this chapter provide the institutional perspective to estimate the probability of speculative attacks. There are several implications from this perspective. First, improving a country's economic fundamentals does help to reduce the probability of speculative attacks. But reforms in the political institutions, in order to enhance the transparency of institutions also help to reduce the probability of attacks. Second, politicians in transparent institutions are less likely to manipulate economy policy for their political benefits. And this also helps to reduce the probability of speculative attacks.

Table 3: The Logit Panel Estimation of Speculative Attacks

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Left	.225* (.121)	.284** (.123)	.765*** (.192)	.208* (.122)	.235 (.199)	984*** (.321)	
ΔPartisan							1.395*** (.529)
Divided Government		.287** (.116)	.916*** (.214)			1.327*** (.369)	.709*** (.143)
President				-.21* (.119)	-.191 (.21)	.097 (.358)	
Left× Divided			-.921*** (.257)			-1.564*** (.443)	
Left× President					-.258 (.251)	-.578 (.399)	
Divided× President						-.501 (.446)	
Left× Divided× President						.842 (.538)	
Election	.531* (.283)	.548* (.284)	.519* (.285)	.541* (.284)	.601** (.285)	.598** (.287)	.57* (.331)
Election(one lagged)	.664** (.267)	.684*** (.267)	.661** (.267)	.677** (.267)	.716*** (.268)	.717*** (.27)	.418 (.338)
M2/Reserve	.0005*** (.00008)	.0005*** (.00009)	.0005*** (.00009)	.0005*** (.00009)	.0005*** (.00009)	.0005*** (.00009)	-.0004 (.0006)
CA Risk	-.021 (.025)	-.013 (.025)	-.019 (.025)	-.022 (.025)	-.014 (.024)	-.001 (.025)	-.018 (.031)
Interest Rate	.001*** (.0001)	.001*** (.0001)	.001*** (.0001)	.001*** (.0001)	.001*** (.0001)	.001*** (.0001)	.001*** (.0001)
Pegs	1.098*** (.23)	.855*** (.236)	1.03*** (.242)	1.102*** (.23)	.768*** (.235)	.811*** (.251)	1.529*** (.292)
Managed	.591** (.192)	.394** (.196)	.397** (.196)	.583** (.191)	.382** (.194)	.276 (.198)	-.143 (.225)
Adjust	.331 (.216)	.17 (.224)	.233 (.226)	.273 (.218)	.012 (.223)	.034 (.234)	.058 (.253)
Floating	.343* (.192)	.144 (.197)	.165 (.197)	.302 (.194)	.271 (.191)	.226 (.196)	.304 (.199)
Constant	-3.242*** (.276)	-3.301*** (.291)	-3.636*** (.315)	-3.061*** (.295)	-3.638*** (.335)	-4.432*** (.448)	-3.882*** (.353)
N	6096	5849	5849	6096	6051	5837	4694
Pseudo R^2	0.06	0.06	0.07	0.06	0.08	0.08	0.09

Chapter 5

Concluding Remarks

Partisanship is an important indicator to explain countries' economic policy choice. However, the empirical evidence is mixed. This dissertation re-estimates the impact of partisanship through different political conditions and argues that the partisan effect on macroeconomic policy is significant, if political institutions provide an environment in which available information is vague. Voters in that environment cannot attribute political responsibility to politicians and, politicians are able to adopt the policy in terms of their partisan goals. Accordingly, Chapter two shows that left governments in divided governments or with parliamentary systems are more likely to increase fiscal debt and the money supply, leading to the higher likelihood of inconsistent policy. I use the sample of 85 democratic countries from the period of 1990 to 2009 and the empirical test in chapter two supports the argument. As the theory of currency crises predicts, the countries adopting an inconsistent policy are more likely to suffer from speculative attacks. Chapter four also finds a higher probability of speculative attacks, when left governments are in divided governments or operate within parliamentary systems.

This dissertation also examines the partisan effect on the choice of exchange rate regimes. Chapter three finds that not only do left governments prefer a floating exchange rate regime, but also the shift in partisan governments increases the probability of a change in exchange rate regimes. That is, when left governments take over from right governments, the likelihood of abandoning a fixed exchange rate regime increases. The empirical evidence in Chapter three also supports the arguments above. Moreover, the partisan effect is stronger in developing countries than in developed countries, suggesting an unstable exchange rate policy in developing countries.

Leblang argues that countries are more likely to suffer from speculative attacks, if they are expected to abandon fixed exchange rate regimes. Accordingly, Chapter four finds the higher probability of speculative attacks, when power is transferred to another partisan government.

Using theoretical arguments and empirical findings, this dissertation highlights the importance of the nature of domestic institutions. Traditional partisan theory ignores the role of political institutions, in which partisan governments would have different behaviors in different political contexts. In addition, the empirical results in this dissertation have implications for developing countries. Besides improving their economic fundamentals, in order to reduce the probability of speculative attacks, developing countries should stress the reforms of their political institutions, increasing the level of transparency and accountability in their political institutions. These political reforms not only reduce the possibility of manipulating macroeconomic policy, but also enhance their credibility in world market. But not everyone is likely to want change, because the political elites usually have personal advantages from manipulating policy and, therefore, they wish to thwart political reforms. As a result, bad economic fundamentals and political institutions with ambiguous information in developing countries enhance the probability of speculative attacks.

This dissertation suggests some directions for future research. First, not only domestic factors, but also international factors should be taken into account in the study of partisan effects, especially in the global era. Second, if a partisan effect is conditional, researchers need to include more institutional factors, in order to analyze partisan effects, such as electoral systems. Finally, this discussion suggests that more economic and political variables should be incorporated into models about the probability of speculative attacks. Political institutions directly affect the decision-making of policy and policy credibility, but not many theoretical and empirical studies

on this subject include political institutions in their models. Political science has developed many approaches and arguments regarding political institutions. Based on the findings in political science, the study of speculative attacks can be extended by adding more political institutions in the model and by observing interaction between economic variables and political institutions. These issues are worth investigating in future research.

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Appendix: Variable Descriptions

Fiscal Debt

This variable is measured by the ratio of central government debt over GDP taken from the International Financial Statistics (IFS).

Money Supply

This variable is measured by the ratio of M2 over GDP taken from the International Financial Statistics (IFS).

Exchange Rate Regime

I use the dataset of *de facto* exchange rate regime from Bubula and Otker-Robe (2002; BOR) for the period from 1990 to 2001, and from *Annual Report on Exchange Arrangements and Exchange Restrictions* by the IMF for the period from 2002 to 2009. The way I regroup the exchange rate regime is below.

BOP's 13 categories include (1) dollarization, (2) currency unions, (3)currency boards, (4) conventional fixed peg to single currency, (5) conventional fixed peg to a basket, (6) horizontal band, (7) forward-looking crawling peg, (8) backward-looking crawling peg, (9) forward-looking crawling band, (10) backward-looking crawling, (11) tightly managed floating, (12) other managed floating with no predetermined exchange rate path, and (13) freely floating rates. I regroup them into five categories: hard pegs (1-3), adjustable parties (4-6), crawls (7-10), managed floats (11-12), and floats (13).

There are eight categories in the *Annual Report on Exchange Arrangements and Exchange Restrictions*:(1) exchange arrangement with no separate legal tender, (2) currency board arrangement, (3) conventional pegged arrangement, (4) pegged exchange rate within horizontal, (5) crawling peg, (6) crawling band, (7) managed floating with no predetermined path

for the exchange rate, and (8) independent floating. I regroup them into five categories: hard pegs (1-3), adjustable parties (4), crawls (5-6), managed floats (7), and floats (8).

Speculative Attack Index

I construct an Exchange Market Pressure (EMP) index based on Eichengreen rt al. (1996). EMP includes three components: the change in exchange rate, the change in reserves, and the change in interest rate. I use equal weights of the three components to measure the incidence of speculative attacks. Speculative attacks are identified of the EMP index exceeds 1.5 standard deviations from its country-specific sample mean.

Partisanship

I use two different ways to measure partisanship. The first one is a dummy variable, *LEFT*, that takes the value of 1 when the ideology of the executive is left (left government), and 0 when it is not (non-left government). The second is to code *PARTISAN* as 1 when the ideology of the executive is right, 2 when the ideology is central, and 3 when ideology is left. Data is taken from the Database of Political Institutions (DPI).

The Change in Partisanship

A dummy variable, *Δ Partisan*, that takes the value of 1 when the code of ideology orientation is different from the previous year, and 0 when it is the same.

ΔPar_right

A dummy variable that takes the value of 1 when the difference of the code of ideology orientation is greater than 0, and 0 when it is not.

ΔPar_left

A dummy variable that takes the value of 1 when the difference of the code of ideology orientation is less than 0, and 0 when it is not.

Divided Governments

A dummy variable, *DIVIDED*, that takes the value of 1 when different parties dominate executive and legislative branches, and 0 when the same party dominates both branches. Data is taken from the Database of Political Institutions (DPI).

Presidential Systems

A dummy variable, *PRESIDENT*, that takes the value of 1 when the government from is a presidential system in a given country, and 0 when the government form is not presidential system. Data is taken from the Database of Political Institutions (DPI) and Cheibub (2007) when DPI is missing the data.

Electoral Systems

A dummy variable, *PR*, that takes the value of 1 when the country's electoral system is proportional representation system (PR), and 0 when it is not. Data is taken from the Database of Political Institutions (DPI).

GDP

This variable is measured by the logarithmic form of gross domestic product. Data is taken from the World Banks' World Development Index (WDI).

Economic Openness

This variable is measured by the ratio of exports over GDP. Data is taken from the World Banks' World Development Index (WDI).

The Number of Veto-Player

This variable counts the number of veto players. The range of his variable is from 1 to 7. The higher the score, the greater the number of veto-player is. Data is taken from the Database of Political Institution (DPI).

Inflation

This variable is measured by the standard deviation of inflation rate in a given country. Data is taken from the World Banks' World Development Index (WDI).

Unemployment

This variable is unemployment rate taken from the World Banks' World Development Index (WDI).

Real Interest Rate

I use short-term real interest rate as the estimator of real interest rate. Data is taken from International Financial Statistics (IFS).